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1892

JOURNAL

OF A

HORTICULTURAL TOUR

THROUGH

GERMANY, BELGIUM,

AND PART OF FRANCE,

IN THE AUTUMN OF 1835.

TO WHICH IS ADDED,

A CATALOGUE OF THE DIFFERENT SPECIES OF CACTEÆ

IN THE GARDENS AT WOBURN ABBEY.

BY JAMES FORBES, A.L.S.,

CORRESPONDING MEMBER OF THE HORTICULTURAL SOCIETY,

AUTHOR OF "HORTUS WOBURNENSIS," ETC.

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TO

M. OTTO,

DIRECTOR OF THE ROYAL BOTANIC GARDENS.
BERLIN,

THE FOLLOWING PAGES ARE MOST RESPECTFULLY DEDICATED,

AS A SLIGHT

TESTIMONY OF GRATITUDE FOR HIS KINDNESS,

AND AS A

TRIBUTE TO HIS INDEFATIGABLE ZEAL

IN THE

PROMOTION OF BOTANICAL SCIENCE,

BY HIS OBLIGED AND FAITHFUL SERVANT,

JAMES FORBES.

PREFACE.

THE continental gardens and botanical collections having been rarely visited by the British gardener, his Grace the Duke of Bedford, with his usual anxiety for the promotion of useful knowledge, very liberally and kindly proposed in the autumn of 1835 that I should undertake a Horticultural Tour, through several parts of Germany, Belgium, and France, with a view of inspecting the different collections and productions cultivated in some of the most celebrated horticultural establishments in these countries.

The notes which are now submitted to the public contain a cursory detail of the various gardens and

objects that came under my observation during a tour occupying a space of eight weeks,—a period of time which the reader will readily understand required the utmost diligence on my part to fulfil the objects I had in view. Yet I was enabled to investigate such modes of culture as were adopted in the principal gardens, where the produce appeared in any way superior to our own; to become thoroughly acquainted with the different systems practised at various seasons of the year would have required an actual residence of many months.

In the mode of forcing fruits and management of the kitchen garden department, the English gardener will find but little abroad superior to what he is daily accustomed to see at home. It must however be observed that the zeal and anxiety displayed throughout Germany in the cultivation and increase of their collections of plants are in no way inferior to our own. In fact, in succulent plants they far surpass us; more particularly in their collections of Cacteæ, which appeared to be a favourite tribe in the principal establishments on the continent. They are certainly deserving of a more extensive cultivation in this country than they have hitherto obtained. Their various shapes, numerous spines, angles, and

the splendid flowers of many of the species, form an interesting and pleasing addition to our botanical establishments; and of all plants requiring the protection of the greenhouse and artificial heat, the Cacteæ may be cultivated at the least expense, and exact less attendance than is generally requisite for hothouse plants. The Palmæ are also extensively cultivated throughout the continent, and notwithstanding many of them are planted in gloomy habitations they were in general very healthy, and evidently more suitable inhabitants for such structures than the deciduous or hard-wooded species. The hothouses erected for the cultivation of plants throughout the Prussian dominions consist of opaque roofs, furnished only with upright lights, which are ill adapted for the flowering or bringing to perfection many of the tender species.

In most parts of Germany the pleasure grounds are very deficient in evergreens, frost being so intense in that country that the *Rhododendron ponticum*, *Arbutus*, *Laurustinus*, *Daphne*, *Portugal*, and even common *Laurel*, require the protection of the greenhouse during the winter season. If these grounds, however, are deficient in evergreens, they are richly decorated, in most instances, with ornamental vases,

statues, and numerous groups of fine sculpture, which contribute greatly to the embellishment of a pleasure-ground. As far as architecture and sculpture are concerned, the continental royal gardens far surpass those in England; but there did not appear to me in the quarters I visited to be a spirit for garden-improvement equal to that which is so generally prevalent in this country.

It now only remains for me to take this opportunity of returning my thanks to those whose kindness afforded me considerable facilities in viewing the different gardens described in this tour; they are, however, more especially due to those horticulturists of Germany by whose liberality I have been enabled to add above six hundred new and curious plants to the splendid collection at Woburn Abbey, entrusted to my care; and I must add, that I found a cheerful inclination, in most instances, to enter into a correspondence for the mutual exchange of plants and seeds. The few remarks on different objects, not immediately connected with Horticulture, which I have ventured to introduce, will it is hoped be received with that indulgence which my imperfect acquaintance with such matters may require.

J. F.

JOURNAL

OF A

HORTICULTURAL TOUR,

IN 1835.

August 19th. Left the Custom House at six o'clock, a. m., by the William Joliffe steam-packet, for Hamburgh; but having a strong easterly wind a-head, we did not pass the sunk light until a little past four o'clock in the afternoon.

20th. Sailing at the rate of six miles per hour; still a strong easterly wind a-head, but a beautiful day, and the sky clear from clouds; about twelve o'clock we were about twenty-five miles off the Texel, with a fresh breeze still right a-head.

21st. A beautiful day, but the wind still continuing against us, we sailed only at the rate of seven miles per hour. About nine o'clock in the morning the small isle of Heligoland made its appearance, much to the gratification of the passengers, this is-

land being only a hundred miles from Hamburgh. It is said to contain from three to four thousand inhabitants, who are chiefly occupied in fishing; haddocks and lobsters are very abundant in its immediate neighbourhood, which are taken in great numbers to the Hamburgh as well as the London markets. The island is said to be nearly a mile in length, and about half a mile in breadth, and now belongs to the British government. At twenty minutes past twelve o'clock we entered the Elbe, where two light ships are stationed, in consequence of the sandbanks, which are rather dangerous in that part of the passage.

The island of Newark-Farm is distant only from three to four miles from the mouth of the Elbe; the houses and cattle were now pleasing objects in view. About three o'clock in the afternoon we arrived at Cuxhaven, which is a small sea-port town, and is in the territory belonging to the town of Hamburgh. It is a very fashionable bathing spot: and a large concourse of ladies and gentlemen assembled at the haven when the steam packet neared the shore. About four o'clock we experienced some heavy drops of rain, with very loud claps of thunder, and towards evening numerous broad flashes of lightning, very vivid, which appeared to skirt along near the ground. On passing along the Elbe, we found it much crowded with numerous sailing vessels, making the best of their way to and from Hamburgh. These, with a variety of handsome church-spires

peeping out amongst various clumps of trees on both sides of the river, gave the scenery a pleasing and picturesque appearance. We have also here at the same time in view a part of the king of Denmark's dominions, as well as a portion of the Hanoverian territories.

August 22nd. Arrived in the harbour at Hamburgh at half-past twelve o'clock in the morning; but by the time we got out our luggage, and boats to take us ashore, it was getting close on to eight o'clock. Shortly after my arrival I proceeded to Flottbeck, to see the nursery gardens of Mr. Booth, which are situated close by the banks of the Elbe, about four English miles from Hamburgh. In this nursery I was much gratified by the extensive collection of plants; there are about one hundred acres of ground under nursery stock, consisting principally of ornamental trees and shrubs, including a great variety of new species, that I had not previously seen in any of our British nurseries. Mr. Booth is a most enthusiastic practical botanist, and spares no expence for the introduction of new and rare plants to his collection. He has arranged along the edges of a walk which is nearly a mile in length a collection of hardy trees and shrubs, which are so planted that the different species of each genus are brought at once under view for comparison. The whole are arranged according to the *Natural System* of *Jussieu*. The herbaceous ground contains above four thousand species of

hardy perennial plants: there are also above twelve hundred different varieties of roses. The hothouses allotted for the growth of exotics and Cape plants are about five hundred feet in length, with a range of pits nearly four hundred feet long for the low and half-hardy species. The collection of *Cacteæ* here amounts to nearly four hundred different species; amongst them are many curious and interesting sorts. There are also some fine specimens of palms, and numerous fine exotics; the collection of Cape and New Holland plants is likewise very extensive. The passion for *Orchideæ* has also extended to this part of Germany; Mr. Booth has a great variety of this tribe of plants, and is building a house solely for their cultivation: he is likewise constructing pits, for the growth of the pine-apple. He has a very fine collection of the *Genus Pinus*, and shewed me several new species that he had raised from seeds, which were considered to be new and undescribed sorts. I saw a species much resembling our *Pinus palustris*, with fine long foliage. Mr. Booth calls it the palustris *excelsa*, and informs me that it grows to a great height, and is perfectly hardy, having stood this winter ten degrees of frost, Reaumur, which is equal to twenty three Fahrenheit, without sustaining the least injury, although quite exposed.

I could not but admire the neatness in which the plants and grounds in this extensive establishment were kept, and notwithstanding the extreme dryness

of the weather, (not having had any rain for nine weeks in that part of the country,) the plants were looking all in a healthy and flourishing state; but the watering of such a collection for so many weeks must have been attended with an enormous expence.

August 23rd. Being accompanied by Mr. Booth, we proceeded along the banks of the Elbe to the villa of M. de la Camp, which is situated close by the road, commanding a most beautiful view of the Elbe and its shipping, as well as Finkenwarder, an island on the opposite side of the Elbe, the one half of which belongs to Hanover, and the other half to Hamburgh. This island produces a very hardy species of oak, which was found there some years ago, and is called the *Quercus Falkenbergense.* M. de la Camp has formed a very complete vineyard on the banks of the Elbe, which was in a very prolific state, as were also the vines that formed an arbour to the front of this gentleman's house.

From this we next proceeded some miles further along the Elbe banks, to the seat of Mr. Baur at Blankanese. This gentleman is a wealthy merchant, and has expended an immense sum of money in the formation of his grounds, according to the English system of gardening. He has formed numerous walks and artificial banks, that command extensive views of the Elbe, These walks and banks, were staked out by Mr. Baur personally, who, I have no hesitation in saying, has displayed

a very superior taste; they are remarkably well executed: in short, the banks and valleys appeared as if they had been formed by nature, but they are principally the work of art. I however regretted not to find a corresponding taste for good plants, to keep pace with the other extensive ground improvements that this gentleman has completed and is proceeding with.

Close by the Elbe are situated several small forcing houses for fruits, a greenhouse, orangery, and some low pits for the cultivation of the pine-apple, whieh has been grown here for several years; but they do not seem yet to have made much progress in the cultivation of this fruit. In front of these houses there is a terrace-wall, that separates the garden-ground from the Elbe, which washes up against it. The stones with which this wall was built were brought a distance of from four to five hundred miles (from Saxony) for this purpose; and it is executed in a very superior manner. On the highest part of the grounds there has been lately erected a handsome Chinese pagoda, which commands a beautiful prospect of the Elbe and its shipping, as well as the opposite island and Hanoverian dominions. A round tower also been lately built, which forms a pretty object in these grounds; several other objects of interest are also to be seen dispersed in various parts, which are considered superior to any other gardens in the neighbourhood of Hamburgh, and are consequently much frequented

every Sunday by visitors, as on that day it is open to the public. We were obliged to take our departure from them much sooner than I could have wished, owing to a very heavy shower of rain which continued for a considerable time; and it being the only rain of any consequence that had fallen in the course of nine weeks, it was very agreeable to that part of the country. Mr. Baur has recently built in these grounds a very handsome house, according to the English style of building, but it is not yet inhabited. It was impossible not to admire the very superior and substantial manner in which the works are all executed in this gentleman's establishment.

On my return from this place to Flotbeck, I then proceeded back to Hamburgh: when on my way I was much surprised to observe bricklayers in some places busy at work, although Sunday. Towards the evening, the rain had quite abated; I then made the best of my way for the Botanic Gardens, which are situated in the suburbs of the town, on a part of the ground which, during the reign of Buonaparte, formed a strong fortification, but these have recently been demolished: they are now laid out as a public promenade for the inhabitants of the town, and likewise a Botanical establishment for the cultivation of plants, and from its beautiful situation, it is certainly one of the best chosen sites for this purpose that has come under my observation. It appeared to be of considerable extent, and irregular form, sloping in part

of it, down to the old rampart ditch, which now forms a handsome piece of water, bounding the garden, and separating it from the promenade on the opposite side, which being laid out as a pleasure ground, with clumps of trees and shrubs on the grass, when viewed from the Botanic Garden, gives a stranger the idea that it is a part of the Botanical establishment, giving the latter a much more extensive appearance than it actually possesses. The extent of hothouses for the growth of exotic and Cape plants, is rather limited, and did not seem to be more than about two hundred and fifty feet in length. I here observed some very fine specimens of *Cacteæ*, and likewise several rare species of *Palms*, such as the *Zamia*, *Friderüs*, *Guilielmi*, *Ætensteinii*, *Lehmanii*, *Caffra*, and *Horrida*. I also was much delighted by seeing in flower, a very pretty plant, called the *Olendorfia procumbens*, which I believe has not yet made its appearance in England. A great portion of the ground in this establishment is occupied by trees and shrubs, which are cultivated for sale, for the support of the garden, consequently much ground is taken up by these, which ought to be assigned to single specimens. In the herbaceous ground, there is also an extensive collection of hardy perennial plants.

August 24th. Went at five o'clock in the morning, to see the fruit and vegetable market, which seemed to be well supplied with fruit and culinary vegetables. I observed large quantities of the new Orleans plum, summer Bergamot pear, and the black

cherries, which appeared to be larger than the same sort (Hertford blacks,) grown in this country. The *Haricot bean,* is also in great repute in Germany, and certainly deserves to be more extensively cultivated in this country, than it hitherto has been, as it forms an excellent substitute for the *French bean* or the *scarlet runner*, which is cultivated here in preference.

After seeing the fruit and vegetable market, I next proceeded to view the promenade which surrounds the greater part of the town, and adds greatly to the comfort of the inhabitants, as well as to the beauty and scenery of the immediate vicinity of Hamburgh. This promenade is laid out very tastefully with numerous clumps of trees and shrubs, various capacious walks leading to different points of view, and objects around the town, sloping towards the old rampart ditch, which is now formed into a handsome irregular piece of water, which enlivens the scenery, and gives the promenade an appearance equal to any pleasure ground in this country. The side facing the town of Altona, is really beautiful; the space of ground leading from the Hamburgh gate, at the Altona side of the town, is very picturesque, especially as we approach towards the Harbour or Docks, whither we are guided by a broad walk, leading to a high projection, or point of view, where we have a delightful prospect of the shipping on the Elbe, with its surrounding scenery for se-

veral miles in extent. The formation of this promenade was commenced about sixteen years ago, is now annually progressing, and advancing towards completion, under the superintendance of Mr. Altuman, who has displayed great taste, in his arrangement of the walks, clumps of trees, and shrubs, as well as the formation of the water. The *Alster Lake*, is situated at the north side of the town, extending about twelve miles in that direction, and adds considerably to the beauty of the scenery in that neighbourhood. It also contributes greatly to the convenience of the town, as numerous boats, with various commodities, are brought to Hamburgh on its surface. The promenades leading to the town of Altona, are also deserving of notice; long avenues intersecting each other are here formed, by double rows of the Lime, Elm, and Poplar trees, with large spaces of grass lawn, intervening betwixt them. After making a tour round the promenade, I next proceeded to view the principal parts of the town, and its churches, which are very splendidly fitted up. The streets of Hamburgh are narrow and paved with round stones, which are not very agreeable to those unaccustomed to walk upon them; the most fashionable part of the town is the side next the Alster Lake, which is much frequented in the evenings.

After getting my passport examined and signed, and securing a place in the diligence for Berlin, I next accompanied Mr. Booth the seedsman, (brother to the nursery man,) in a drive round the outskirts of the town,

where there are some pretty villas, and also various tea gardens, which, although a week day, appeared to be well attended. I was rather surprised to find at 5 o'clock in the afternoon, a large concourse of ladies and gentlemen assembled in front of a small theatrical performance, which it appeared was the daily practice in that part of the country, the ladies being occupied sewing and knitting, and others drinking coffee. The town of Hamburgh is said to contain above a hundred thousand inhabitants, and they certainly appeared to me to be in a very flourishing state. In short the general appearance and respectability of the inhabitants, that prevailed throughout the town and its vicinity was very striking. At eight o'clock in the evening, I took my departure from Hamburgh, by the *Schnell-post*, (diligence) for Berlin, which was accomplished in one day and two nights travelling; here I had a good specimen of diligence *expedition*, especially for the first eight hours, being placed in one of the bye chaises, which is only calculated to hold four passengers, and is of much less dimensions than the main diligence, and much lighter; I fully expected every moment to be upset, as a great part of this road between Hamburgh and Boisenburgh, is full of large deep ruts that kept us completely on the rock for many miles, but after we passed the latter town, we then had an excellent road, yet the speed of our crawling conveyance was but very little increased

The roads throughout all the Prussian territories that I have travelled on, appeared to be in excellent repair.

August 25th. Arrived at a small town called *Ludwigslust*, about one o'clock, where we dined, and stopped nearly an hour, which enabled me to make a hasty visit to the grounds, attached to the beautiful palace of the grand Duke of Mecklenburgh, who generally resides here. In front of the palace are pretty jets of water, but the most imposing sight, is a fine avenue of limes, that leads from a large piece of lawn adjoining the palace; the avenue appeared to be nearly a mile in length, and had several walks branching from the right and left, through a shrubbery, or rather plantation, where there were also several small pieces of water. Close to the palace is an old orangery, with some good trees standing in front of it. At a short distance, and nearly opposite to the palace, is a handsome building, called the "Augusta Villa," with an extensive piece of pleasure ground, laid out after the English mode of gardening, with numerous clumps of trees, and shrubs dispersed on the lawn; the walks and grounds appeared to be in very good order, but I was unable to examine the extent of the collection of plants that it contained. In the vicinity of Ludwigslust, there were several orchards, and large pieces of ground under vegetable culture. The country from this town as far as Warnow, was rather more varied than that we previously passed, but the soil appeared light and sandy, and Scotch firs, the only trees observed in

the plantations in view. At Warnow our luggage was examined by the police, and our passports demanded, and detained until we arrived in the town of Perlebergh, when they were again examined, and then returned to us.

August 26th. Arrived at half past three, A. M. at Nauen, a small town about twenty five English miles from Berlin; this place appeared conspicuous, from the number of small flour mills, situated in the river Havel, which passes close to the town. About 6 o'clock in the morning, we had reached to a small town, called Spandau, which is said to contain about 5000 inhabitants, and appeared to be strongly fortified: it is only ten miles distant from Berlin, where we happily arrived at about 8 o'clock in the morning. As we approached the city, the country looked more cheerful, and in a better state of cultivation, the soil also was of a more fertile quality, and trees and plantations more numerous. I was very much pleased by observing growing by the road side, several species of Alpine plants which are not easily to be met with in this country, in an indigenous state. The *Gentiana Pneumonanthe,* appeared in great abundance, and with its brilliant blue flowers was to me pleasingly conspicuous; but the diligence, although slow, was yet too fast to allow me time to procure a few specimens. On passing the magnificent palace of Charlottenburg, I was much struck with its extensive appearance, and fine park, leading from it all the way to

Berlin, through the Brandenburg gate, and along the Linden or lime tree walk, to the splendid university, armoury, museum, and other large buildings, and handsome bridges, with the statues placed on them, its magnificent palaces, which all appear in view from the diligence, by this the Hamburgh line of road, and to the eye of a stranger has a grand effect, giving him the idea of a great and noble city, by seeing so many magnificent buildings immediately as he enters the town. Within a few stages of Berlin I met with Mr. Parker, Bookseller, from Oxford, travelling in the main Diligence, where I joined him; on our arrival in the city, we took up our abode in the St. Petersburgh hotel, after breakfast we separated, he in search of books, while I went to visit the Royal Botanic Gardens at Schœnburgh, which are situated about three English miles from Berlin, where I was much gratified by the many fine specimens of plants that I saw. Having letters of introduction to M. Otto, from Sir W. Hooker and Dr. Lindley, as well as from his old friend Mr. Hunneman, I experienced the greatest attention from him, he took great pains in pointing out to me the various new and curious plants in this extensive collection. There were some very fine species of *Palms*, in great beauty, nearly reaching to the top of the hothouse, which is about thirty feet in height. The *Latania borbonica*, was particularly fine, and had attained nearly twenty five feet in height, its foliage or fronds

extending from ten to twelve feet on each side from its stem. The *Gomutus saccharifer*, had also reached to the height of twenty five feet, and numerous other choice specimens of the Palmæ, were in an equally healthy and luxuriant state, and of little less dimensions than those specified. The *Aristolochia brasiliensis* was particularly fine, covered with long beautiful speckled flowers, that extended over a large part of the rafters. Many new and fine specimens of the *Gesneras* were also in flower; they appeared different from any that I had previously seen in this country. Some of the *Melaleucas*; in the conservatory had grown to the height of nearly forty feet; the *Magnolia grandiflora*, which requires the protection of the conservatory during the winter months was now covered with fine large flowers. Numerous other species of New Holland plants, had grown to an amazing height in the conservatory.

The hothouses in this garden are placed in several separate ranges, and are very substantially built in comparison to our erections in England. The quantity of timber employed in the rafters is immense, but giving them a very heavy appearance; yet I have rarely met with a more healthy collection of plants anywhere; they may be considered the most extensive on the continent of Europe. In short, I never before saw so many plants cultivaed in pots. The numerous species of New Holland and Cape *genera* were quite astonishing, as well as the hardy and Alpine species. As to the Cacteæ, there

can be no hesitation in saying that the collection in these gardens of this curious tribe of plants really comprises the most beautifully grown specimens that I have ever seen; the different species that have grown to a considerable size have a very interesting appearance, particularly the *Mammillaria* and *Echinocactus* tribes; with their numerous spines and angles, they form a pleasing object either in or out of flower. M. Otto has long been celebrated for his ardent love to this curious tribe of plants, and he certainly has succeeded in forming a valuable collection. The species of *Ferns* in these gardens are likewise very numerous, and there are many very fine specimens amongst them, which have grown to a great size. I could not but admire the very tasteful manner in which the Cape and New Holland plants were arranged out of doors in the summer months, and which were neatly plunged to the rims of the pots, to prevent them from being blown about by the wind. The *Bignonia radicans* formed a very prominent object against the end wall of one of the hothouses; the luxuriance and brilliancy of its flowers far surpassed any that I had previously seen. A fine specimen of the *Laurus indica*, which must have been fully twenty feet in height, was standing out of doors, and obliged to be cut down, as it was getting too high for the house in which it stood in the winter season. The *Robinia Pseudacacia*, *inermis* and *tortuosa* were both splendid trees, which ornamented the grass lawn. The *Magnolia acumi-*

nata, also a beautiful specimen, as well as the *Quercus palustris*, and *rubra*; both had attained a great size, and were handsome trees, as well as several other species of this genus. Mr. Otto having kindly requested Mr. W. Brackenridge, who had been for some time from Scotland, residing in the neighbourhood of Berlin, and was then employed in the Botanic gardens, to accompany me the following day to such places as he considered most deserving of notice, I arranged with him to be ready betwixt six and seven o'clock in the morning, to proceed to the different gardens.

August 27th. We started at seven o'clock in the morning, to the royal gardens at Charlottenburg palace, which are situated about four English miles from Berlin. The grounds attached to this royal palace, are said to contain four hundred English acres, laid out with various walks, clumps of trees and shrubs, as well as several pieces of water, embracing some very fine views from different points notwithstanding its being a flat surface, but it is much diversified by trees, bridges, and sheets of water that intersect the lawn. There are several bridges leading across the stream to the most ornamental and picturesque parts. The palace is also seen to great advantage from several points in the grounds. A very fine specimen of the *Quercus palustris* was in great beauty on the grass. I also saw some very large trees of the *Populus alba*, which were considerably larger than any tree of this species that

I had previously seen. M. Fintelman, the superintendant of the royal gardens, pointed out to us a very complete *Fructiferum*, that he had lately formed in these grounds, comprising a collection of all the hardy fruits. Nearly adjoining to the palace, is a very handsome little flower garden, lately executed for the growth of the dwarf flowering perennials and annuals. I was much pleased by an arbour formed with the different species of Cape and New Holland plants, that are rather flexible in their growth; the pots in which the plants grew, were all plunged round the back, the branches tied closely to it and thickly covered, producing a great variety of foliage, and pleasing effect, and having the appearance of growing there permanently throughout the season. Opposite to this Botany Bay, or Cape Arbour, is a pretty summer house, which is chiefly composed of reeds. In the centre of the flower garden, there are various posts with iron rods extended from them for the training of creepers. Again, at the extremity, is an artificial grass bank, considerably elevated above the flower beds, planted with the dwarf china rose, which has a very good and natural effect. The orange-house is an oblong building, of great length, with opaque roof and backwall, upright lights only in the front, completely covered with grape vines, having a very fine crop of fruit all over them. The orange trees were all in excellent health, some of them bearing separately nearly two hundred fruit; there are about three hundred of these trees culti-

vated here. I also saw a fine variety of Dahlias, and various other beautiful flowering plants in great perfection; these Dahlias are fully as good as any I had seen in England; great attention is paid to these flowers by M. Fintelman, who took great delight in pointing out the various objects most worthy of notice in these grounds. Having devoted several hours to the inspection of this extensive establishment, we then took our leave of M. F. and proceeded back to Berlin, when I had another opportunity of observing more fully the various improvements, that are now going forward in the Thier-garten, or park, which extends from the royal palace of Charlottenburg, to the Brandenburg gate. This park is considered one of the finest in Europe, and is now undergoing extensive alterations, the grounds forming in several places so as to harmonize with the English style of landscape gardening; numerous walk and rides leading in various directions, with groups of sculpture, make this an interesting promenade for the public, by whom it is much thronged, particularly in the evenings. It is approached from Berlin by the Brandenburg gate, which cannot fail to attract the stranger's notice. It has a most magnificent appearance; on the top of this gate stand the celebrated bronze horses, removed by Buonaparte to Paris, but were again replaced by the Prussians in their original site. In front of the Royal Museum, is a very handsome marble vase, which measures about sixty four feet in circumference, and four

feet in depth; a handsome fountain is also playing, throwing the water to a great height. The ground floor of the museum is occupied as a sculpture gallery, which contains numerous statues, and busts; but it appeared to me to be deficient of the finer groups. I was however much pleased with the beautiful imitation marble columns of various colours, which have a polish equal to the original. The picture gallery is above that devoted to the sculpture, and I could not but admire the beautiful state of preservation of the paintings, and their very admirable arrangement. From hence we proceeded to the nursery grounds of M. Bouschie, which are not of much extent, nor yet is there much for the Horticulturist to admire, except some very fine specimens of the *Cacteæ* (*Opuntia*) tribe; some of the species are from eight to ten feet in height. After visiting this nursery, we then proceeded to the forcing gardens of M. Bouschie, who grows a large quantity of pine apples and peaches for the Berlin market; the pine apples were very small, and much inferior to our English grown fruit; the crop of peaches was very abundant, but not of a large size, the trees old, and the hothouses of a very inferior description. We next proceeded to the nursery garden of M. Touissaint, which appeared to contain a much better collection of the Cape and New Holland plants, than any of the other nurseries I had previously seen in Berlin. Here was a good collection of the more hardy species of *Rhodo-*

dendrons; the forcing of flowers is likewise extensively practised in this establishment, and the grounds in very good order. I next visited the nursery ground of M. Mathieu, where there were some good specimens, but none that I had not previously met with.

August 28th. Went at six o'clock in the morning to see the fruit and vegetable market, but was rather disappointed in observing so very inferior a supply in comparison with what is to be seen in Covent Garden Market. In fact for some time I thought that I had gone to the wrong place, as the market is held every alternate day in two different parts of the town; but on enquiry I fouud it was seldom better supplied. Large quantities of grapes grown out of doors, or on trellis, were in the market; also a pretty good supply of peaches, but these were of a small size. I only observed one solitary pine apple, about one pound weight. The mode of preserving the fish, which were also brought to the market where the fruit and vegetables were exposed for sale, was new to me. They are kept alive in water in oval shaped wooden tubs or vessels, and each sort is kept separate. Large quantities of game, poultry, butcher's meat, as well as cart-loads of hay and straw, are found abundantly in the market.

After making a tour through the principal parts of the town, and getting my passport signed by the police and English ambassador, I made a second visit to Mr. Otto, and also then called on Dr. Kloytch, to

whom I had a letter of introduction from Sir W. Hooker. Dr. Kloytch has the charge of the Royal Herbarium, which is situated opposite and nearly adjoining the Botanic Gardens, containing several apartments for dried specimens of all the plants that flower in the Royal Botanic Gardens, which are gathered and preserved as they appear in flower. Attached to the Royal Herbarium house is a piece of pleasure ground, one side of which is enclosed by a good brick wall that has projecting piers, betwixt which grape vines are trained, and confined to the spaces of about twelve feet between the projecting piers; each sort is thus prevented from intermixing with another; a wooden pailing enclosing another part of this garden is likewise adapted to the same purpose. Dr. Kloytch was once a pupil of Sir W. Hooker's at Glasgow, and is considered an eminent botanist, he has certainly formed a very natural arrangement of the different species in the genus *Ericæ*, arranged according to the form and structure of the flower. He shewed me several native specimens of this genus that I have not yet seen in England, but seeds of which I hope to receive from him before long. I was much gratified by the excellent method he described to me, in preserving the specimens of *Fungi*, which appears to be the most effectual mode of drying these plants that I have yet seen. After looking over various specimens in the Herbarium, Dr. Kloytch accompanied me to the Botanic Gardens, where I again saw Mr. Otto, and was enabled to see more minutely the extent of this noble collection of

plants. It is proper to observe that the space of ground allotted for this garden, is not sufficiently large for such an extensive collection of plants. Many of the oaks and several other fine trees are too much crowded, and not seen to advantage. After examining all that I wished to see here, Mr. Otto, Dr. Kloytch, and Mr. Brackenridge, accompanied me into Berlin, where we passed through another fine part of the "*Thiergarten*," and being joined by Mr. Cuming, the celebrated Zoologist, we spent a very pleasing evening in the discussion of botanical pursuits, and the cultivation and beauty of the *Cacteæ* in the Berlin Gardens.

August 29th. Left Berlin at seven o'clock in the morning for Potsdam, where I arrived at eleven o'clock in the forenoon, a distance of eighteen English miles. Every stranger must be forcibly struck with the scenery as he approaches Potsdam, particularly in passing Prince Charles's villa and grounds, with the view of the handsome bridge lately erected across the river Havel, at this side of the town expanding itself to a very capacious sheet of water. On my arrival at Potsdam I proceeded to the Royal Gardens at *Sans-souci*, which are situated about one English mile distant. Having a letter of introduction from M. Otto to M. Linne, the principal director, I was disappointed in not finding him at home. Free access was afforded to the various departments, and I then made the best use of my time in examining the different gardens attached to this residence, which

required considerable diligence to get through a portion of the departments. I first inspected the kitchen garden, which is very extensive, and contains several ranges of low houses, and pits, for the forcing of cherries, plums, and apricots, with a good collection of standard fruit trees, as well as the walls being well stocked. The length and breadth of the principal range of houses in this garden, is 255 feet long, and about 9 feet in width; the upright sashes are eight feet high, placed in a slanting position; the roof-lights were about six feet long, but these lights were at this time all removed from the house, the trees being planted as standards in the interior border; the sashes are removed as soon as the fruit is gathered, in order to expose the trees to the full effect of the atmosphere. In another garden at a short distance from this vegetable one, there are numerous other ranges of hothouses for the forcing of fruits, which are in great request for the royal table. The structures here used for this purpose are about six feet high in front, and about ten feet in width; the length of the roof sashes were from nine to ten feet. In these houses the flues are placed at the back, running parallel to the backwall. Some of the houses are heated by hot-water pipes, rather of a novel construction, and I much fear not calculated to give any great command of heat; they consist of two round copper pipes, about two inches only in diameter, which run parallel along the front of the house about two feet apart from each other. The peach trees are planted inside the

house, within one foot of the front wall, and are trained perpendicular to the trellis, to the height of six feet, being as high as the upright glass. A rider is then carried in general, close under the roof lights, trained to a lath trellis which is nailed to the underside of the rafter.

As soon as the frosty nights are over, the houses are generally stripped of the sashes, and the trees and fruit left fully exposed to the sun and weather, while the fruit is maturing; but such fruits as are wanted at an early period, are of course not thus exposed. I here observed various trees of plum, cherry, and apricot, thus treated, a more congenial mode of treatment, than by having recourse to pots or tubs, as is in general practised in this country, especially where there can be houses spared for this purpose, as the trees will get established in the ground, and be enabled to produce a more abundant crop and larger fruit than if their roots were confined to a small space for nourishment. I also saw here a great quantity of very fine melons, all trained over moss, and at this season these also were exposed to the weather. The appearance of the fine terraces in front of Sanssouci Palace, gave me more gratification than any thing of the kind that I had previously seen. This palace, originally erected by *Frederic the Great*, is now a favourite summer residence of the Crown Prince. It is situated so as to command a most beautiful view of the surrounding country, with six tier of terraces in front of it, each terrace falling about twelve feet

under another towards the south from the palace. Along the top are flower borders and broad gravel walks, with a row of very fine orange trees placed along the edge of the gravel walk on each of the terraces, which give them a magnificent appearance. Against these walls are trained principally grape vines, provided with a frame in front for covering them with glass; peaches and apricots are likewise here grown.

In the centre of each terrace is a noble flight of steps thirty-six feet wide at the bottom, but at the top the width is only fifteen feet; containing in each from twenty-five to twenty-seven steps. The view of these from the avenue or road by M. Lennie's house, is really grand: the different flights of steps from this point of view appear to form one connected tier leading to the palace, which, with its magnificent orange trees and groups of sculpture, strike the eye of every stranger with admiration. I here congratulated myself on being alone, and left to examine and take the dimensions of the various objects, without being hurried. At a short distance from the lower terrace is an oval basin of water, surrounded by a grass lawn and a gravel walk, or rather carriage drive; and on the exterior side of the circular sweep of the gravel, are placed twelve large statues. This basin was originally intended for a fountain; the reservoir for supplying it was formed by Frederic the Great on an eminence on the north side of

Sans-Souci palace, where it must be several hundred feet above the level of the basin of water where the fountain was intended to be placed. The effect from the palace windows and from several other points of view, if it had been completed, would have been very magnificent when the water was playing. At a short distance from the palace is another large building, which was occupied by a part of the establishment; in front is a large piece of pleasure ground, in which are placed also a number of very fine orange trees; one of them, pointed out to me, is named after *Frederic the Great*, his majesty being a great admirer of these trees, insomuch, that during the war he took possession of all the best that came in his way, and sent them to his royal gardens at Potsdam. The head of this tree, named Frederic the Great, was equal to one of our ordinary sized Portugal laurels, its branches extend over seventeen yards of ground in diameter. I should imagine there must be fully 400 trees grown in this establishment, all of large dimensions. The soil in which they are grown consists of a black sandy loam, well incorporated with cow-dung and rotten leaf mould, with a mixture of bone dust, in some cases horn shavings. The houses for the protection of the orange trees in the winter season, are simply a long range or ranges of red tiled roofed buildings, with merely upright lights in the front or south side, which are provided with wooden shutters that are closed during frosty weather. The flues run along in the floor

of the house, and are not calculated to give out much heat, but the roof and back wall being opaque, and the front furnished with shutters, little heat is required for preserving the trees from the frost. They are generally turned out of doors in the month of May, and not taken in again until October. Arranged along with the orange trees I observed a very fine specimen of the *Nerium Oleander*, covered with blossom, also several fine plants of the pomegranate, covered with flowers. The figs were also in prolific state against a wall and growing in light sandy loam. At the opposite end of the palace is situated the picture gallery, which opens into another garden department, with hornbeam hedges, and numerous box edging scrolls; but this piece of ground is evidently not much attended to: the walks, flowers, borders, are not in good order. The collection of paintings, however, in the gallery will infinitely repay the visitor for the disappointment he may experience in the badly kept garden. This gallery is two hundred and fifty-two feet long, and thirty-six feet wide; the dome and cove cieling are richly gilt, the floor and walls inlaid with marble. The paintings are very numerous, and in beautiful preservation. Those taken from this gallery by Buonaparte and again replaced in the spot they originally occupied, are particularly pointed out to the visitor. I observed on each side of the door, as we entered this gallery, two very fine marble statues, one of *Diana*, the other of *Louis* XVI. A straight avenue or drive leading from

the Potsdam road, in a direct line by the front of the terraces at Sans-souci, to the new palace, is of considerable length. At the extremity of this avenue is the magnificent palace built by *Frederic*, after the completion of the wars in which he was engaged. It is said to have been erected with the English subsidy; however this may be, it is undoubtedly a very magnificent building.

The grounds leading from this and Sans-souci palace are all laid out as pleasure-ground, with numerous walks and roads, leading in various directions, which are very well kept; but the grass lawn here is rather rough, and not much attended to. The quantity of sculpture placed throughout these grounds is truly astonishing; at almost every intersection of the walks, various statues or busts are placed, and likewise in different recesses that are formed out of the road and walk edges.

Along the front of the new palace, facing towards Potsdam, is arranged a row of very fine orange trees, with several pieces of sculpture.

The garden ground extends considerably to the north of the palace, where it is much varied, and commands an extensive view of the adjoining scenery and country. The Belvidere and terraces here are also prominent objects. I was much pleased with a piece of trellissing that surrounded the oval spot of ground at the south side of the palace. This trellis projects about twenty-one feet on one side, and forms an oblong square about forty-two feet long. The side

next the oval consists of eight round columns, formed by thin flat iron bars, opposite to which are openings to correspond, that look into a running stream of water, that separates the park or pleasure ground from a piece of kitchen-garden ground on the opposite side. The peculiarity of this trellissing is in its handsome projecting cornice, with columns at nine feet apart, formed by the flat iron bars. Arched receses are likewise made between these columns, about five feet wide, and nine feet in height. The entire height of this trellis with the cornice is twelve feet, and was evidently originally gilt, but it is now in a corroded and decaying state; not a vestige of paint is even to be seen upon it.

At a very short distance from this splendid palace is a piece of vegetable ground enclosed with formal clipt hornbeam hedges, which ought to be removed, as it disfigures that part of the grounds, and is much too close to the palace. The walks and lawn adjoining were in pretty good order, especially the former.

Leading from the palace to a royal chateau that has been lately erected, is a very fine carriage drive, winding through a flat piece of ground, which is laid out principally after the English fashion. This residence is also inhabited by one of the royal princes. I was much pleased with the quantity of grapes growing on a double terrace, or rather covered walk, which was completely crowded with vines and its fruits; the lower walk ran alongside of a

wall, and the trellis and arches projected about twelve feet from it, and were twelve feet in height. Over the top of this wall is another trellissed walk, which is also completely covered with grapes; it leads up to the palace windows, and is about two hundred feet in length. Adjoining it, and in front of the windows, is a small flower-garden, elevated above the ground level I should imagine about twelve feet: we ascend to it by a flight of steps at the furthest end; the side next the palace is nearly on the same level as the window sills. There are several fountains in it, and a few clumps of the *Petunia violacea*, but nothing else of interest.

Connected with this terrace garden, but on the ground level, is a piece of ground laid out in various beds, principally furnished with dahlias. Here is a handsome marble fountain or column, and a well formed sheet of water.

About three hundred yards from this spot is *Charlottenhoff*, a handsome erection, which is used occasionally as a tea or coffee room. This building is surrounded by numerous walks, and columns with vines trained against them. Ascending a flight of steps, that leads to a point of view looking down upon a fountain, playing with great force. This spot is tastefully laid out, and in very neat order. Several other ornamental erections are placed in these grounds, but to attempt to describe them all would require an actual residence for some weeks.

The royal palace of Potsdam is a magnificent building, in the form of a quadrangle. The interior apartments contain numerous objects of interest, which as being highly estimated by *Frederic the Great*, are particularly pointed out to the stranger. The arm chair which he was in the habit of using, is still in a good state of preservation; I was much pleased with the magnificence of the rooms; the paintings and furniture are very splendid, and in good preservation. The ground attached to this palace consists of a flat surface, extending towards the south, as far as the river Havel, and is laid out in clumps of trees, various walks; the space next the palace is a larger piece of gravel, which is daily used for the exercise of the military. Adjoining it are numerous avenues of horse chesnuts, and busts of ornamental sculpture placed along the first row of trees, as well as some in various other positions. Opposite the south, or principal front of the palace, is an oblong piece of water, in the middle of which is placed a noble group of Neptune and his sea horses, which has a very grand effect, but the water is kept rather low and filthy, which might be easily remedied, as the river Havel passes within a few yards of it. By the edge of the river, in a marshy spot of ground, I observed a large quantity of the *Hydrocharis morsus-ranæ* (Frogbite,) and *Stratiotes aloides*, (water soldier,) growing in great abundance.

I should however have observed that the fine marble group of Neptune was much injured by the

French army, during the time they occupied Potsdam. In short it is really grievous to see the depredations that were committed by that army on the sculpture about Potsdam and Sans-souci, whilst they resided there. The soldiers for amusement were in the habit of firing musket balls at the different groups and statues.

August 30th. Left Potsdam at eight o'clock in the morning, for the *Pfauen Insel,* or Peacock Island, where I had appointed to meet Mr. Cuming at nine o'clock. We had to cross a branch of the river Havel to get to the island, which contains a collection of plants and animals somewhat resembling the Zoological Gardens in Regent's Park. I was here more fortunate in finding M. Fintelman at home, than I was at Sans-souci, and having a letter of introduction to him from his uncle, who superintends the royal gardens at Charlottenburg, I found him remarkably attentive, and an intelligent young man. I was here surprised to find the *Robinia pseudacacia* had attained seven feet in circumference, at four feet from the ground, the branches of which extend over thirty two yards of ground in diameter. I also observed some fine specimens of the oak, which were little inferior to our largest English oaks. The conservatory is an oblong building, about one hundred and twenty feet by forty, and forty two feet high, and consists of several tiers of front sashes, with a span roof, the north side being a dead wall with a

gallery for resting in behind it, which commands a full view of the plants underneath.

I was much gratified, by the very flourishing state of the plants, and their remarkable neatness. A very fine collection of the *Palmæ*, is cultivated in this stove or conservatory, some of which have made a rapid progress in their growth. The *Latania borbonica* measured twenty seven feet in height, spreading over a space of equal dimensions in diameter. I understood that his majesty the king of Prussia frequently breakfasts in the summer season in this conservatory, under the shade of the palm fronds (or leaves). I remarked also the *Pandanus utilis* twenty three feet high; the *Dracæna Draco*, (Dragon Tree) had likewise grown thirty six feet high; *Pandanus sylvestris* thirteen feet in height, and eleven feet in diameter across its branches; the *Bambusa arundinacea*, forty feet high; a shoot of this *cane*, grew seven feet six inches in the course of three weeks; the *Corypha umbraculifera*, a very magnificent specimen. The *Latania borbonica* is placed in the centre of the conservatory; the tub in which it grows is completely concealed by planting around it various *ferns*, and other low growing plants, which are tastefully arranged, and form a nice little stage round the tub, having a very neat appearance, with the walk round it, which shews the palm to the best advantage. Opposite to this spot is a recess in which is placed a small fountain tastefully decorated by *ferns* that succeed well in a shady situation.

There is likewise in this recess, a very handsome marble screen, richly carved and ornamented. The grounds are very judiciously laid out in various clumps of flowering shrubs and summer flowers, and were at this time in full perfection. One of the finest Hydrangeas that I have seen, was in full bloom, and its large purple-blue flowers were very conspicuous. The grass lawn was in a much better state than any other that I had previously seen in Germany, or even met with during my tour on the continent, and the whole garden ground very neatly kept. The island is said to contain about four hundred English acres. The erections for the different animals and birds are judiciously placed, and consist of handsome structures, arranged from two to three hundred yards or more apart; these apartments were kept remarkably clean and in good order. An extensive collection of beasts and birds are preserved in this establishment. The grounds are considerably varied, and some fine views are to be seen from several parts of it, as well as from the top of some prospect towers. The effect of the river Havel, and surrounding plantations at the opposite sides, adds expressive features to this landscape.

After seeing the various objects most deserving of notice, both in the botanical and zoological departments, we proceeded across the river, to the grounds of Prince Charles, still accompanied by M. Fintelman; they were laid out, principally, in the English

style, his royal highness being particularly partial to it.

This spot consists of a great variety of surface, with several beautiful vistas, and is really very tastefully planted, and the grounds formed, and kept in very excellent order. The public road from Berlin to Potsdam passes close by the front of the grounds, and there is a low wall, with an invisible wire fence on the top of it, betwixt the road, where the views of the grounds are seen to most advantage. One side of them extends close to the Havel, where a handsome summer house is erected, which commands a fine prospect of Potsdam, the new bridge, and shipping, and likewise the scenery on the opposite side of the river, which is much varied. Under this building are two colonnades covered with creepers, which have a very pretty effect.

On the one side of a hill nearly opposite to this villa, is a new residence erecting for prince William; the views from it must be very extensive, as it is situated on a commanding spot.

We next proceeded to the magnificent edifice called *Marmorpallast*, or marble palace, which is situated at a very short distance from Potsdam, and close to the margin of the Havel. It is a splendid building, the greater part of which is constructed with marble. The cornice appeared to be about five or six feet deep; it is of white marble, as also is the base above the ground for several feet; the door and window jambs are likewise of the same material. The

intervening spaces of the walls are built with red brick. The colonnade at the principal entrance consists of handsome marble columns. The pleasure-ground and gardens attached to it are said to contain two hundred and fifteen German acres of ground, throughout which are dispersed various clumps of trees and shrubs, with extensive walks and rides branching through it in different directions. These grounds are very flat, and have but little variety or picturesque appearance in them. The number of good exotics and New Holland plants is considerable, as well as a very fine collection of healthy orange trees, with some fine specimens of hardy trees growing singly on the grass. I here observed the *Juglans fraximifolia* bearing a number of good sized fruit. In the flower garden some good German stocks, then in full bloom. The borders and grass lawn were in a rough state.

We next proceeded to Sans-souci, Mr. Cuming not having previously seen it. I was delighted in having another opportunity of looking round this truly magnificent spot; and being accompanied by Mr. Fintelman, who kindly devoted the entire day in conducting us to the various objects best worth our notice, we proceeded through the grounds attached to Sans-souci palace, and then to Charlottenhoff, the new palace, &c., and were much gratified by the numerous objects of interest we had pointed out to us in the various places that we inspected.

On our return to Potsdam, we went to the top of

Breuchensberg, or hill of brewers, where a prospect tower is erected. The view from this spot is really grand in the extreme; we look down upon Potsdam and the numerous palaces that are in its environs. Sans-souci and the new palace are both prominent objects in view from this prospect; but the most pleasing features are the numerous small green islands that are formed by the river Havel, near the bridge at Potsdam; the intricacy and variety of outline of water, and the number of boats and small sailing vessels making their way to Berlin through this place, form a pleasing sight. The evening was now drawing to a close, and little more remained to be seen by daylight. M. Fintelman took his departure for the Island of Peacocks, and Mr. Cuming started in an hour after for Berlin. I was thus again left alone to muse over the different objects that had occupied my attention during the day.

August 31st. Not having previously seen the pine-apple forcing department, I walked out early this morning to Sans-souci, where this fruit is cultivated. I was rather surprised to find a great extent of low houses and pits devoted to the growth of the pine, without observing a single fruit amongst the whole stock that was scarcely worth cutting. There cannot be less than one thousand feet in length of houses and pits adapted to the pine-apple, and these varying from eight to twelve feet in width. The principal range was heated by smoke flues, and the plants plunged in saw-dust, with tan under;

which practice is frequently adopted in this country, especially when tan is scarce. The young plants in the pits appeared pretty healthy, but such fruit as was fit for cutting, or advancing to maturity, would bear no comparison to our English produce.

After satisfying myself with what was to be seen in this department, I returned to Potsdam, from whence the diligence to Dresden, my next place of destination, did not start till twelve o'clock. The time I had to spare before my conveyance came up, was employed in inspecting the town, which consists, it is said, of 2000 houses, and 16,000 inhabitants. The streets are in general very clean; one leading from the palace to Sans-souci is inlaid with planks for the wheels of the different vehicles to run on, similar to the Russian manner. I also saw in the vicinity a Russian colony, which was inhabited by natives, sent as a present some years ago by the Emperor to the king of Prussia; they are now becoming pretty numerous, and their colony is extending.

Potsdam is intersected by various small canals, that lead from the Havel, and are very convenient for the conveyance of turf and other materials by water carriage. The greater number of the houses are handsomely built; there was then erecting opposite to the palace a magnificent church. At the other end of this palace is an iron bridge, crossing the Havel; the piers consist of stonework, there are eight arches, one of which is used as a draw-

bridge for the passing and repassing of boats going this way to Berlin. This town is the principal depot for military, who are exercised daily in great numbers in front of the palace.

At twelve o'clock the diligence arrived, when I took my departure in it for Dresden.

The road leading from Potsdam to the latter town was lined on each side with fine poplar trees, of a considerable size, for several miles of the journey. The soil in this part of the country appeared to be a light sandy loam: the plantations were chiefly composed of the Scotch fir; but close by the road side, in several places between Potsdam and Herzberg, were large quantities of plum trees, loaded with fruit.

We arrived at Herzberg at half-past ten o'clock; but owing to the darkness of the night I was unable to see, or form any opinion of the size of the town or quality of the houses.

September 1st. At three o'clock in the morning we reached another small town, called Elsterwerda, which was said to contain about 900 inhabitants. The next stage we came to was Grossenhayn, where we arrived at half-past five o'clock, a.m. This town is situated in the kingdom of Saxony, and contains nearly 5000 inhabitants. At this stage we were transferred to another diligence.

The country from Grossenhayn to Dresden is much more varied than any I had previously seen in Germany.

The scenery as we approach to Dresden is very picturesque, both as regards distant views and variety of surface: when within a few miles of the town, we meet with a very fine avenue of lime trees, extending for a considerable distance, and then is continued by horse-chesnuts. On descending a hill, a fine prospect of Dresden presents itself to the eye. The soil now appears more of a black colour, and less free from sand, than what I had previously observed. I also saw several beech trees intermixed with the Scotch-fir.

Arrived at Dresden, at nine o'clock a.m. After getting breakfast, I immediately proceeded to the house of Professor Hughes, who was then engaged, but Mrs. Hughes asked Mr. West to accompany me to the principal gardens; this gentleman, a school colleague of Lord Cosmo Russell, and an admirer of plants, very cheerfully accompanied me to several of the gardens in the vicinity of the town. We first proceeded to the Botanic Garden, belonging to the University, which is very limited in extent. I was however much pleased with the fine collection of Cacteæ that are grown in this establishment, as well as a large collection of Cape, and other green house plants. The number of species of hardy perennial plants in this small space of ground is truly astonishing; there is also a great variety of Cape bulbs and *Gramineæ*. The extent of glass is confined to a very long conservatory, stove, and several pits for *Cacteæ*.

Having been introduced by Mr. West to M. Lehman, the superintendant of the garden, he accompanied us to the gardens of Lieut. Weber, situated at a short distance from the town, and considered the most extensive for glass and space, of any about *Dresden*. I should imagine by its appearance there could not be above seven or eight English acres of ground under nursery culture. The collection of plants for sale comprises chiefly *Camellias*, young orange trees, Cape and new Holland plants, many of the scarcer sorts of which I observed had been lately introduced to that establishment, from Mr. Low's nursery at Clapton. A fine specimen of the Uhria speciosa was in great vigour of health. A great variety of dahlias, and dwarf China roses in full flower were in these grounds.

I was much pleased by the simple mode of grafting the *Camellia* and orange trees, which appeared to be very successful, and is generally practised by M. Liebig the gardener, which method is what we term in this country crown grafting; by this mode the shoot or graft, after insertion in the stock, is only tied neatly to the stock, with a bit of worsted thread, and then sealed over as well as the top of the stock, by a little bees-wax, (without clay as practised here); when this operation is completed, the plants are put into a frame or pit, with a little moist heat, until the graft and stock begin to coalesce, when they are shortly afterwards gradually exposed to the air of the greenhouse. In this establishment

there are several very good hothouses for plants. In one of the ranges is placed a circular shaped conservatory, heated by hot water, on rather a novel construction; these hot water pipes being formed into perpendicular columns, rising from the floor to the height of from ten to twelve feet. These pipes, thus constructed, gave out a great command of heat, and answered the original intention very satisfactorily. The plants in this nursery garden were very well grown, and all in a healthy state.

I next visited the nursery of M. Hofrath Kreyssig, which is only a short distance from the Botanic garden. I saw likewise some good kinds of greenhouse plants, as well as many rare species of the Rhododendron tribe; the *Rhododendron campanulatum*, a fine specimen; a collection of orchideous plants is also forming in this nursery garden. There are several small hothouses for the growth of Cape and tropical plants, which are also cultivated for sale; but the space of ground is much too limited, as well as confined by houses to do justice to a collection of hardy species. After visiting these gardens and grounds, I took my leave of Mr. West, to whom I was much indebted for the kind interest he took in the object I had in view, and who appears devotedly attached to plants and gardening. Professor Hughes having recommended me to see the chateau erected on the banks of the Elbe by the late Lord Findlater, an English nobleman, I expected to have found some fine gardens, or collection of plants, but, to my surprise, on my ar-

rival, I found it now occupied as a tea garden; it is much frequented by the inhabitants of Dresden, in consequence of its romantic situation on the banks of the Elbe, commanding a prospect of the country, studded with small villages situated in the valleys between the hills, or rather eminences; but these are not to be compared with our Scotch mountains. Along the Elbe is a great extent of vineyard, which did not appear to be in a very prolific state, the soil being of a poor sandy texture. Many pretty villas were also situated along these banks, which had very pleasant prospects from them.

September 2nd. Having agreed to meet Mr. Lehman early this morning, we proceeded to the Catholic church, which belongs to the court, and is certainly a magnificent building, the interior richly ornamented, and well worth the stranger's notice; we next visited the Protestant church, which is likewise a splendid erection. The museum and post office are also very magnificent buildings. I was however surprised at the appearance of the royal palace, which consists of a dark gloomy looking old fashioned residence, and with little in its exterior appearance, calculated to give a stranger the idea of its being the seat of royalty. Through the assistance of Mr. Lehman, who procured tickets of admittance to the gallery of paintings, I was favoured with a sight of this celebrated collection, which is considered to be amongst the finest in Europe, and is said to contain one thousand five hundred pictures; among so many there are undoubtedly some very splendid ones. On our return

from the gallery, we passed through his majesty's coach-house, which must at least have contained no less than sixty different carriages; a very splendid one lately presented to the king by Prince Metternich, was pointed out to us. From hence we proceeded to the museum or repository of minerals, birds and animals. The collection of the feathered tribe in this establishment is particularly extensive; some very large blocks of petrified wood, that were much prized, were pointed out as remarkable curiosities. In one of the departments was a table four feet in diameter, of a solitary piece of wood of the *Tamarindus indicus*, (tamarind tree.) In front of the building various orange trees are arranged along the edge of the walks. What is called *Bruehl's* garden is also deserving of notice; it forms a public promenade for the inhabitants, and is pleasantly situated, containing a picture gallery, which is denominated the gallery of duplicates.

Dresden is said to contain about 80,000 inhabitants, and is much admired for its fine houses and streets. It is considered by many as one of the finest towns in Europe; but I must confess that in my opinion it is inferior to either Berlin, Munich, or Brussels. It is situated on a flat spot of ground with the river Elbe running through it; the bridge over which is said to be 1450 feet long. The Arsenal is a large building, but I had no time to see it, as the diligence left this day at twelve o'clock for Munich, and as these conveyances only go twice or three times a week at most

from the principal towns throughout Germany, the losing of an hour to see an object might detain one for two or three days. Having taken my leave of Mr. Lehman, I seated myself in the diligence for Munich, a journey which occupied us three days and three nights. The road winds along the river side from Dresden to the first stage on our way to Munich, and is very beautiful, the scenery much diversified, and resembling that of some of our Scotch mountains; the plantations of forest trees comprise a mixture of silver fir, beech and Scotch-fir. The hill and dale that continued for a considerable way along this line of road rendered the scenery very interesting and picturesque, and which appeared so to continue until it became quite dark, when all view of the country was lost.

We passed through Freyberg, a small town situated on the river Mulde, and is said to be 1179 feet above the level of the sea. The next town or village that we came to was Chimnitz, where we stopped for supper.

September 3rd. Arrived at one o'clock in the morning at Zwickau, at which town the road from Leipsic joins the one from Dresden, where the diligences from both towns meet, and the passengers are transferred from the Leipsic diligence to the one from Dresden. Whilst waiting for the vehicle getting ready to start, I was agreeably surprised to find Mr. Parker, seated at the same inn; he had arrived from Leipsic by that diligence: when we parted at Berlin

we had no expectation of again meeting each other so soon.

One of my fellow travellers from Dresden was a Frenchman, but he was evidently as awkwardly situated whilst travelling for want of a knowledge of the German language as I was myself; consequently we both kept Mr. Parker pretty busy in acting as an intermediate interpreter whilst we were together.

The scenery about Zwickau is beautifully varied with hill and dale, and woods, with a small river called the Mulde running along by the bottom of the rocks. The houses are neatly built, and of considerable number, containing a population of from seven to eight thousand. The roads in the vicinity of this town are rather mountainous, but not so much so as in the preceding stages. The next small village that we passed through was Plauean, where we arrived about seven o'clock in the morning: it is said to contain about 700 inhabitants.

We next proceeded to Hof, where we arrived at ten o'clock, changed diligences, and had to stop for several hours before we could again get on our journey. On entering this town we passed by a large tea garden, situated on the side of a hill, at the bottom of which is a small river, that tends greatly to enliven the scenery. The town of Hof is in the kingdom of Bavaria, and the population is said to amount to 6,000, living in handsomely built houses. The main street that leads through it I should imagine is nearly a mile in length, and very wide;

there appeared to be a fair in the town on this day, which occupied a great part of this street.

The cathedral is an ancient building; the entrance consists of a handsome Gothic door, the walls of which must be about eighteen feet in thickness. The town-hall is likewise a fine erection, and the houses and streets appeared all in clean and neat order.

From Dresden to Hof the country productions principally consist of agricultural produce; the potatoe and oats are extensively cultivated. A sharp frost this morning blackened all the potatoe tops.

At one o'clock we got into a Bavarian diligence, and proceeded to Berneck, a small town surrounded with beautiful scenery, that much reminded me of the Derbyshire rocks, to which in picturesque appearance it was fully equal.

Arrived next at Bayreuth, at eight o'clock in the evening; it is a town of considerable size, said to contain 10,000 inhabitants. On the diligence driving up to the inn door we found the space in front of it completely covered with a military band, and a large concourse of people listening to their music; this band belonged to a cavalry regiment that was on its march through the town. We next started for Nuremberg, where we arrived at half-past eight o'clock the following morning.

September 4th. On our arrival at Nuremberg, we found that we had to remain here for several

hours before the diligence started again: we made the best use of our time, proceeding to St. Laurence's Church, a Gothic building, the doors and windows richly ornamented with groups of sculpture and other carved work in bronze; the painted glass is very handsomely executed. This church was begun in 1254 and is a most magnificent building. The tabernacle consists of a beautifully carved and richly ornamented spire, executed in 1496 of carved stonework. Although it has been converted into a Protestant church, yet the Catholic ornaments are still remaining. We next proceeded to view the Catholic church, which is likewise a very splendid Gothic building, erected in 1355, and the exterior walls richly ornamented. In the Market place, we were much gratified with a very pretty spiral fountain, richly carved, erected in 1356. The town-house is also a very fine old structure, containing many good paintings in the large and small hall. The fresco paintings in the latter apartment are beautifully executed on the ceilings and walls, which are also highly ornamented by gilt mouldings. The paintings in the great hall consist of various pieces of fresco, by the celebrated Albert Durer. The triumphal car of the emperor Maximilian, drawn by twelve horses, in beautiful fresco painting, and a very fair picture of the present king of Bavaria, by Byng of Munich, is also to be seen here.

From hence we went to the cathedral, in which is St. Sebald's Tomb, highly deserving of the

stranger's notice. This church contains the oldest metal font in Germany; it was formerly used in baptising the emperor's children. The saint's tomb, by Fisher, is a masterpiece of workmanship,executed in 1508; there is also a curious figure of the artist himself. The tomb is a pretty Gothic structure, cast in bronze, and the body of the saint enclosed in a silver coffin, under an elegant Gothic canopy. We next proceeded to the picture gallery, which contains a good collection of paintings by German artists, in good preservation. From hence we went to the imperial castle, where there is growing a Lime tree, *Tilia europœa*, said to be seven hundred years old. I measured the girth of this tree, at four feet from the ground, and found it to be fifteen feet in circumference ; it still appeared in a pretty healthy state.

The dining room in this ancient castle, formerly used by the king, is of large dimensions, and contains a large number of old paintings, which are in good preservation ; the rooms although uninhabited for the last four hundred years are still in good condition. From the windows in this castle we have a beautiful prospect of the town as well as of a considerable extent of country. On our return from hence we visited the house in which Albert Durer resided, which is now converted into a gallery for modern paintings, exhibited for sale, many of which appeared to be most beautiful pieces of art, and objects of great interest to numerous visitors who were then present

admiring them. By this time it was drawing near the hour we had to start by the diligence. We made the best of our way back to the hotel, and got all ready by one o'clock, the appointed hour of our departure from Nuremberg, which is a town of considerable size, containing a population of upwards of thirty thousand people.

In the environs are large tracts of ground under vegetable culture, but I was unable to learn of the existence of any botanic garden or good nursery establishment in the immediate neighbourhood. Large fields of tobacco were cultivated in the suburbs, as well as extensive plantations of the *Hop*, which appeared very prolific. The soil we passed from Nuremberg to Munich was more sandy than it previously had been; the scenery is also more flat and less varied than in our preceding stages.

Sept. 5. Arrived at Pfaffenhofen, at six o'clock in the morning. Near to this town large quantities of the *Genista germanica*, were growing close by the road-side, also the *Dipsacus laciniatus*, in great abundance. Approaching nearer to Munich, I observed growing in a plantation the *Vaccinium Vitis Idæa*, in great plenty, reminding me, from its occurrence, of the mountains of Scotland. The scenery in the vicinity of Munich, is of a great sameness, but the Tyrolese mountains appearing in the distance considerably add to its picturesque effect. We reached Munich at eleven o'clock, where we found some dif-

ficulty in getting apartments, the hotels being then so full of strangers.

In the afternoon I was accompanied by Mr. Parker to the Botanic garden, which is situated close to the town, having a very handsome entrance with Ionic columns, and neat iron railing, which encloses a large part of this garden. The *Arboretum* of trees and shrubs is confined to the two ends of the garden, it being an oblong square, but the south side is much the longest. The space of ground is very confined for the growth of large trees; the entire space devoted for this purpose is not an acre of ground, consequently the different sorts are much crowded together.

The interior of the garden, in front of the range of hot-houses, is laid out in numerous oblong squares, with gravel walks intervening; in the centre walk are three round basins of water. These squares are again divided into beds for the herbaceous plants, wherein a good collection are cultivated. In one of the divisions there is an *aquarium* for aquatic plants, which consists of oblong square troughs, lined with brickwork for retaining the water; these are about two feet wide by two deep, and an intervening space of ground, of from six to eight feet, in which are grown such species as do not require the water: but a damp situation, notwithstanding, is requisite. In the apartments where the hardy perennial plants are cultivated, are numerous apple trees, all in full bearing; these ought to be eradicated and

their places supplied with ornamental trees or shrubs. Apple-trees, however useful, are not in character with a botanical collection; more especially as the apple is so common by the road sides through Germany; a collection of this fruit should find a place elsewhere than in the botanic garden, where the space of ground is already much too limited for the collection of plants. A lofty range of hothouses about five hundred feet in length, has a very good effect; they are only furnished with upright sashes in the front, the back and roof opaque, the latter finished in the semi-cove form, and neatly plastered. I was surprised to find the Palms looking remarkably healthy, notwithstanding these dark houses, many of the species had really grown from twenty to twenty five feet in height.

The collection of the Brazilian species is very numerous, but many of them appeared drawn and too much crowded for want of light and room in the pits. The Cape and New Holland kinds were then out of doors, very healthy and well grown. I was much pleased also with some very fine specimens of *Cacteæ*, the variety of which is reckoned but little inferior to that of Berlin. In short, there is an extensive assortment of the various species of *Succulentæ* in this establishment. The director, M. Seitz, having been long a collector, has succeeded in forming a great variety of this curious tribe; he was extremely liberal in parting with any of his duplicates.

Sept. 6th. M. Seitz having the kindness to ac-

company us to the Royal gardens at Nymphenburg, which are situated about four English miles from Munich; we proceeded thither immediately after breakfast, and found that these grounds required no little time to make even a hasty inspection.

The French garden in front of the palace consists of straight and broad gravel walks, with long stripes of grass lawn, and borders about twelve feet wide of shrubs running parallel to the avenues of horse-chesnut trees. Along the edges of the walks various vases and other ornamental sculpture are arranged; leading from these walks, a straight piece of water, more in the form of a canal, than an ornamental lake, runs parallel in two different directions; the one parallel to the palace, is crossed by two wooden bridges, which are prominent features from several points of view. The centre, or main canal, leads in a straight direction for a considerable distance, and is broken by several very pretty cascades, and handsome marble basins, as well as different groups or figures of sculpture. The water comes rushing over the marble ledges with great force, and was certainly the brightest and purest that I had ever previously seen. There are also some very fine jets in which the water is propelled to a great height by machinery. A well formed lake nearly adjoins the bathing house, said to occupy about fifty Bavarian acres of ground, the outline of which is much varied with different projections of land, islands, and the banks of turf tastefully planted with

trees and shrubs, forms a very pleasing contrast. A curious bark is placed on this sheet of water, consisting of two small boats, with a platform, on which is placed a chair, so that a person may sit and read, or fish, and at the same time guide this boat by his feet, that are resting generally on the paddles.

Close by the margin of this lake, is a very pretty circular temple, with a figure of Apollo, that forms a prominent object from several points of view. A small cascade passing under a ledge of rockwork, on the top of which is placed a marble figure of Pan, and a goat at his feet, forms another object of interest in this part.

The grounds from the south west of the bathing house, (or Pavilion, which is ornamented by paintings and statues) have been lately much improved, and are now considerably varied with different clumps of trees and shrubs, undulations and rockwork. The surface is naturally a flat, but art has, during the last three years, created great inequalities and alterations in this part of the grounds; the banks and undulations are very judiciously formed, the trees and shrubs tastefully grouped together; the walks and rides are of great extent, and very neatly kept and gravelled.

The range of plant houses at Nymphenburg is the most extensive and substantially built of any that I had previously seen in Germany, about one thousand feet in length, and varying from twenty to twenty four feet in width, the height not exceeding

twenty-eight feet. I was here surprised to find that the hothouse in which a fine collection of *Palmæ*, and other Brazilian plants were grown, was heated by very small hot water pipes, which I imagined were far too small to sustain the temperature of such a house, although the back and roof are opaque, and of course require considerably less artificial heat than if constructed with glass on all sides. The boiler that heats this house is about seven feet long, three deep, and three feet six inches wide, and consequently contains a large body of water, when once heated it gives out a great portion of caloric from its sides and surface, being placed at the back of the house, but in the interior, and concealed by the plants. The pipes branch right and left from the boiler and appeared to be only two inches in diameter, yet, I was informed, they were found quite sufficient for the heating of this conservatory. Undoubtedly the boiler being so very large rendered pipes of greater dimensions unnecessary. The frost is, however, much more intense in Germany than in England; *the Lauristinus*, *Arbutus*, *Rhododendrons*, *Portugal and Common Laurel*, were cultivated at Nymphenburg as green-house plants; they are too tender to endure the winters there.

In front of this botanical range, or more directly opposite to the palm house, is an arboretum of hardy trees and shrubs, but the site, for that purpose, is badly chosen, and by far too contracted, and should have been selected in the pleasure ground, at

some distance from these houses, where there is ample space, and would have formed an interesting feature. As at present the more common kinds of trees and underwood are the only hardy species of decoration in many parts of the ground. Opposite to the east end of the range of plant houses is an oblong piece of ground, laid out in narrow beds by the edge of the walks, which are occupied with a collection of dahlias, and other herbaceous flowering plants.

On our return from this botanical range we visited a small private garden, close by the palace, which has also a very pretty cascade at its extremity, and ornamented by sculpture.

The palace of Nymphenburg forms almost a semicircle of a large radius on the Munich side, or principal front, but that facing the gardens is more of an oblong square, and in consequence of the numerous roofs appearing from the semicircular front, that are disconnected and of various elevation from the main building, it has more the appearance of a number of small villas, than of a royal residence, particularly as we approach it from Munich, by the side of the straight canal that leads to the principal entrance. Nearly opposite the centre of the palace on this side is a circuitous basin of water with a fountain in the centre and rockwork around it. This water is conveyed into the gardens, and must be of great extent from the appearance of the course it was running, which leads a considerable way towards

Munich. After our return from Nymphenburg gardens, we proceeded to the English garden, which is said to contain about five hundred English acres of ground, and is a favorite promenade for the inhabitants of Munich. This park, or pleasure ground, is rather of a flat surface, but much diversified by clumps of various trees and shrubs, and fine sheets of water, the margins of which are much varied, but unfortunately full of weeds. The drives and walks that lead through these grounds in different directions are very extensive, some of them being nearly five miles in length. The grounds adjacent to the queen's palace are very well kept, and deserving of notice; but a piece of water in view from it is very filthy, which is the more extraordinary, as it might be easily kept clean by turning into it a branch of the river that runs through these grounds.

We observed some very fine specimens of the *Juglans fraxinifolia* with fruit on them, and very large trees of the *Salix alba*, which were here in greater size than any I had ever seen. Numerous clumps of various kinds of trees and shrubs are grouped together; but these are in most instances rather crowded, and not enough of lawn is seen to intervene between them. A handsome observatory was erecting, situated on an artificial mound, which, when finished, will command a fine prospect over these grounds. We also visited several of the churches. St. Mary's church is very splendidly fitted up, and has handsome marble columns. In it is placed a

very superior statue of Eugene Beauharnois. St. Michael's church is likewise deserving of notice from the beautiful marble columns, The choirs of the different churches were this day all decorated with Orange trees, *Hydrangeas*, and other flowering plants.

Sept. 7th. I appointed to be in the Botanic gardens with M. Seitz, by eight o'clock in the morning. Immediately on my arrival I met with Mr. Forster, nephew to the vice president of the Linnean Society, who is also much attached to botany. The greater part of the day was spent with M. Seitz, looking over the numerous species of *Cacteæ*, and *Succulentæ*, and after having finished my visit here, he had the kindness to conduct me to the Glyptothek, which is a very magnificent quadrangular building, containing a fine collection of antique sculpture; the floors and walls are inlaid with various marbles, the ceilings richly ornamented with gilt mouldings, and fresco paintings. It has twelve apartments, one of which is devoted to modern sculpture, and possesses some fine specimens in this art.

I next proceeded to the Pinakothek, which is situated at a short distance from the Glyptothek, and is likewise a very splendid building, but it is not yet finished. It is intended as a repository for paintings, and consists of a number of very capacious apartments with gilt cielings of extraordinary splendour. The suite of rooms is said to be 500 feet in length, and on the south side is a long passage or gallery, the ceiling of which is ornamented with fine fresco

paintings. The exterior of this Pinakothek is equally magnificent, and when finished will undoubtedly be one of the most attractive objects in Europe.

Sept. 8th. This being a holiday and inclined to rain, we visited the royal palace, which is at present undergoing great alterations and additions. The first object that attracted my notice, was the granite steps of the king's staircase, which measured twenty one feet in width; at the top is the body guard room, and then an inner ante-room, the walls of which are beautifully ornamented with fresco paintings, as is likewise the adjoining room, in which are represented as though suspended from the ceiling and cornice, fresco painting of numerous fishes.

The family dining room, with cove ceiling and fresco paintings, and most beautiful inlaid floor, must attract general admiration. The throne room is however still more capacious, and the walls are ornamented by various alto-relievos in plaster. I observed in several of the windows that the squares of glass used were five feet long by three feet in width. His majesty's cabinet is also splendidly fitted up. The apartments intended for the queen are still more superbly finished, and represent subjects in fresco painting taken from the German poets.

The surbase of her majesty's room is of fine marble; the room is about forty feet square, the dressing room of rather larger dimensions. The queen's throne room is really most splendidly finished, the walls and mouldings gilt, and the surbase of fine blue

marble. There are several other apartments intended for her majesty, representing in fresco paintings various subjects from the poems of Burgher; with the pilgrimage to the holy sepulchre in fresco. The grand staircase is most magnificent; the walls and steps are of fine marble, with four Ionic marble columns at the top, the whole furnished in the most superb style. The lower suite of apartments is equally splendid; the walls are decorated with paintings in fresco of several of the emperors of Germany. The magnificence of the decorations on the walls and ceilings of the new apartments in this palace are such that no one can form any idea of their grandeur without a visit.

Adjoining to this, is the statue gallery of antiquities, which measures about three hundred and thirty six feet in length, by forty five in width, with a cove ceiling painted in fresco. I here saw a beautiful Florentine Mosaic table, for which Napoleon offered sixteen thousand florins. There is also a Bavarian almanack of the fifteenth and sixteenth century, in form of a circular table, about seven feet in diameter, inlaid with brass; but the letters and figures almost obliterated. The entrance to this antique gallery consists of a handsome grotto in shell work, with various figures, birds, and devices, in alto-relievo.

There is placed opposite the new addition to the palace a colossal figure in bronze of the late emperor, with a huge lion at his feet. Near this palace is a

magnificent Post-office, now building. There is also the Theatre, which is likewise a very splendid structure. We next visited the Gallery of Paintings, which is well deserving of notice, and contains a very valuable collection of pictures. The space of ground called the Hof Garden, which is a fashionable promenade, and consists of numerous rows of trees and gravel walks, is bounded on one side by a very long gallery, highly ornamented with various frescos. Although denominated a garden, I could see neither flowers nor shrubs; only rows of trees, that formed a shady promenade in the summer months, when it is much frequented by tea-parties.

In the afternoon we made another visit to the English garden, and round the environs of the town; but this being a holiday, all the principal establishments were shut. I was however unable to hear of there being any other garden establishment worth seeing, that I had not previously seen: we therefore procured our passports, and secured our places in the diligence for Stuttgard.

Sept. 9th. Left Munich at six o'clock a.m. The scenery for the first stage was rather flat; but as we approached Augsburg it became considerably more varied. By the side of the road on this route I observed the *Gentiana Pneumonanthe*, in great abundance; I here had an opportunity of collecting several specimens, whilst the diligence was ascending a long hill, which was well planted, and where some fine trees of the spruce fir were in view.

The houses in Augsburg have old-fashioned red tiled roofs, with numerous windows projecting like skylights, even five rows deep on the sides, in very bad taste. Augsburg contains 27,000 inhabitants; and several ancient buildings, particularly the Episcopal palace, Cathedral, and Town-hall. The Cathedral, a Gothic building, contains some curious old tapestry and paintings, representing the apostles sleeping whilst our Saviour was praying. There are also some curious old tombs, with models; and several handsome fonts with large bronze figures. The Town-house, which contains a picture gallery over the ground floor, is a very fine building; the gallery where the paintings are kept is 120 feet long, 62 feet wide, and 56 feet high, with a carved wood cieling, richly gilt. The pictures were many of them of immense dimensions, and in fine preservation, but of the old German school. We here also visited the German Literary Gazette printing-office, and also the steam engine which is used for throwing up the water to supply the different fountains in the town.

Whilst Mr. Parker was making purchases of books here, I proceeded to the garden of M. Schatzle, which is situated in the suburbs. This garden is very well kept, and contains some good exotic and Cape plants, and a good shew of summer flowers, with several straight avenues of trees planted so as to form an arbour or shady walk. In this garden is placed a colossal group in bronze that weighs 10,500 pounds, executed by Chirardi in honour of Fugger.

The first of the Fugger family was an Augsburg merchant, and is said to have left his heirs above six millions of golden crowns, besides other property. From thence I proceeded to the nursery of M. Schultz, which contains vegetables as well as nursery stock: there are two or three small hothouses, or rather pits, for the growth of the tender species, but I saw but little in this establishment worth notice, although considered the best nursery garden about Augsburg.

It was now drawing near the hour that we were to take our departure from Augsburg in the diligence; whence we started at 7 o'clock p.m. for Ulm, the next town of any note.

I omitted to mention that we were accompanied through the different departments in Augsburg by the French gentleman who travelled with us from Dresden to Munich, and also by Mr. Withy, who was returning from a tour, and going then to Heidelberg; he travelled with us as far as Stuttgard, where we all parted.

Sept. 10th. Arrived at Ulm at half-past four o'clock in the morning. This is a pretty town, situated on the left bank of the Danube, in the kingdom of Wurtemberg, and is said to contain 23,000 inhabitants. We stopped here about an hour.

The first stage beyond Ulm consists of a fine agricultural district. The second stage presented rocky and fine scenery, planted with hard wood, the birch and beech trees intermixed, but the latter sort prehills on both sides, which is particularly picturesque,

and surpasses the much admired Matlock scenery, for many miles. When we arrived at Geislingen we had time to admire the huge rocks peeping out amongst the trees opposite this village, where there is also a very fine prospect tower, which overlooks the town, and great extent of country. I observed, growing on the banks of Geislingen glen, the *Asclepius vincetoxicum*, *Helleborus officinalis*, and several other scarce plants.

Along this country numerous orchards of fruit trees prevailed, such as plums, pears, and the apple, which were very abundant, all growing close by the road side and full of fruit.

The road through Geislingen to Goppingen is very beautiful, being a great vineyard country for many miles, commencing about Plockingen, and extending along the face of the hills to Stuttgard. We passed through an old fashioned town called Esslingen, which is situated on the Necker, a river that heightens in a great degree the beauty of the whole valley along which it winds.

Cobbett's corn appears to be extensively cultivated in this district, particularly near to Stuttgard, where we arrived at six o'clock in the evening. Here I lost all my travelling companions, Mr. Parker starting for Frankfort immediately, and Mr. Withy the following morning for Heidelberg; both which towns I afterwards visited.

Sept. 11th. M. Hertz, who has a small nursery

garden in Stuttgard, and whom I had previously seen in Kew gardens, very kindly volunteered to accompany me to the Royal Botanic Gardens here, which are situated at a short distance from the palace, and contain a number of old hothouses, and a good collection of plants in a very healthy state. In short, I was surprised to see the plants looking so healthy in such old worn out opaque roofed houses.

There are also cultivated here many very fine specimens of the *Cacteæ*. I saw one of the *Cacteæ senilis* above eighteen inches long, a very fine healthy plant. The *Echinocactus cornigerus* measured about six inches in circumference, and some other kinds were also nearly as fine.

The pleasure ground belonging to this palace contains about two hundred and sixty German acres; it is tastefully planted, and laid out in numerous drives and rides, forming a pleasant promenade for the public.

A very fine orangery, with dark roof, is situated at a considerable distance from the Botanic gardens, and near it a very complete flower house was erecting, the rafters of which were of metal, and the sashes all wood, heated with smoke flues, that pass under the pit, where an arched cellar is formed, so that mushrooms or other vegetables may be accelerated. I regretted that this house was not heated by hot-water, which would have rendered it very complete. It is intended to remove near to it the kitchen garden, which is situated at a very different part of the town,

and in a very dilapidated state. Numerous pits for melons, and pines, are in these gardens, but in this state of intended transition they are not kept in good repair. After going through these different departments, M. Bosch, the superintendent of all the Royal gardens, then returned to the Botanic garden, while M. Hertz conducted me to a small villa garden, containing a very choice collection of *Cacteæ*, some fine large specimens of the *Opuntia* tribe and *Cereuses* were here.

Having called on the Baron de Meyendorff, the Russian ambassador at Stuttgard, his excellency accompanied me to a small nursery garden, which contained some good specimens of plants of the more hardy sorts of the New Holland and Cape species, but little of novelty amongst them. From hence we proceeded to the chateau of General Spizenberg' which has been lately erected on the side of a hill, commanding a most delightful and extensive prospect of Stuttgard and its varied scenery. I was much gratified to find that the old warrior, after undergoing the fatigues of many campaigns, was now devoting his leisure hours to the pursuit of botany and horticulture. Baron Meyendorff informed me that the general acts entirely as his own gardener, and he has certainly succeeded in forming a very choice collection of plants, consisting of hardy shrub, perennials, and exotics. There are grown in this small spot, sixty sorts of *Camellias*, a good variety of *Ericas*, and numerous other Cape plants, with some

very curious *Cacteæ*. In a little stove, divided in two divisions, I observed also a few pine apples, but of a very inferior size, and not worth the trouble even of eating, let alone rearing. The other description of plants looked healthy, the peach-trees against the low wall were very well managed and neatly trained. The vines were also judiciously trained to a wooden trellising against the wall. On the whole it is an interesting collection, and well worth the stranger's notice. On my return I proceeded in the afternoon to Rosenstein palace, which is about two English miles from Stuttgard; but his excellency having the kindness to send his carriage, and being again accompanied by M. Hertz, we soon arrived there, and again met with M. Bosch.

This palace is a magnificent building, placed on a fine situation, commanding beautiful views of the Swabian Alps, also of Carstadt, where there are found buildings of the Romans, and large pieces of fossils, particularly of the mammoth. The Necker also forms a fine feature from this palace.

The grounds are very extensive, and the drives and walks well kept; the ground is now formed into beautiful sloping turf, which I understood was formerly in a very unlevel and rough state. It is beautifully diversified with various fine drives, which I could not but admire, being destitute of the fantastic twists, that are so often thrown in without the the least meaning.

At present the grounds around this palace have

rather a naked appearance, for want of trees and shrubs, but this defect M. Bosch is rapidly removing, so that a few years will produce a very different effect; much difficulty is however experienced in getting the trees established, owing to the high elevation of the ground, and the general droughts in summer. At Rosenstein, I saw one of the most complete vineyards that I ever met with, formed on the slope of a hill, with wooden trellisses, so constructed as to have the greatest degree of the sun's rays, at that season when the fruit requires it most. These trellisses are arranged about six feet apart each other, and are formed thus, △, so that the vines are laid on an inclined plane, and the fruit appearing on all sides, have really a delightful effect. The trellis is five feet high, and six feet wide at bottom, and the whole constructed something like a parabola, and continued along the slope of ground in a curved line. I did not observe the vine in such a prolific state any where else, and the whole looked remarkably neat. At a considerable distance from the palace, some very extensive fruit terraces were forming on the slope of a hill, near the town of Carstadt; nearly two hundred men were busily employed blasting rock, and forming the terraces, which are intended for the vine, fig, peach, apricot, &c., and from the fine sheltered situation in which they are placed, I imagine the success will be fully equal to their expectations. On approaching these terraces I was at first surprised to observe the workmen surrounded

by a number of soldiers, who were stationed at different parts, throughout them. I however soon observed that this precaution was necessary, as many of the workmen so employed, were convicts, and heavily loaded with chains round their legs. I walked over a great part of these extensive grounds, and was much pleased with the different objects I saw, and improvements proceeding with.

Sept. 12th. Started this morning, for Hohenheim palace, which is situated about six English miles from Stuttgard; it is now occupied as an agricultural establishment, and has attached to it a thousand acres of ground, devoted to agricultural experiments. I was much gratified by seeing the granary of seeds, consisting of a great variety of the different kinds used in husbandry, which was said to amount to five hundred sorts. The stock of cattle and sheep, is very fine and extensive. The repository of agricultural implements contains the various instruments used in farming, from every known country, and are all kept in excellent order.

The different domestic apartments in the palace, are occupied by numerous pupils, who congregate here from all parts of Germany. I was happy to learn that the produce of the establishment was sufficient to meet all the expences, attending its cultivation. In the pleasure ground, or rather nursery, a great quantity of the more common sorts of shrubs is cultivated. I observed a fine tree covered with fruit of the *Prunus cirrhifera*, an excellent plum,

quite round, and of a purple colour. I also saw a fine specimen of the *Tilia alba*, that was planted by Duke Charles the *Fraxinus juglandifolia*, was a particularly noble plant, as well as the *Quercus macrocarpa*, and various other species of this genus. There are about sixty *arpents* of ground here, under young fruit tree cultivation, which are grown for sale.

During the time that Duke Charles resided at Hohenheim, the gardens were much celebrated, and attracted numerous visitors from all parts of Germany. There is a fine piece of ground called the English garden, that was much admired, but now we have only the forlorn remains of it left. At the front of the palace, are still several of the old flower beds, and the balustrade wall, which forms a fine sweep, at the principal or entrance front. It was in Duke Charles's time well stocked with orange trees, but none are now in existence. The ground falls considerably, towards the south, from the palace, and when under garden cultivation, it must have had a very pretty effect. The view from the windows, over a small town called Boblingen, and the surrounding scenery, is very fine, the Swabian Alps appearing in the distance. I should imagine Hohenheim palace, about sixty years ago, must have been one of the most magnificent in Wurtemberg, but the apartments are rapidly going to decay. The new road lately formed near to Stuttgard, winding through the vineyard plantations, with their numerous small huts or watch

boxes, has also a very pretty effect, although rather fatiguing from its steep ascent.

On my return from Hohenheim, I again called on Mr. Koster, the British secretary of legation, who accompanied me to the house of M. de Kerner, where I saw eighty-three volumes of the splendid Botanical work, executed by the late M. de Kerner, which consists of above one thousand drawings of the various fruits, and other exotic flowering plants, which are undoubtedly exquisite specimens of that gentleman's abilities as a draughtsman. These volumes were only purchased by the royal libraries of Vienna, St. Petersburg, Munich, Stuttgard, and Copenhagen, at a price of seventeen hundred pounds; only six or seven copies were executed, one of which is still on hand, in the possession of M. de Kerner. After again procuring my passport, I started about eight o'clock in the evening, for Carlsruhe, where I arrived at five the next morning.

Sept. 13th. On my arrival I found that the diligence would start in the course of twenty minutes for Baden. I started by it, and arrived there at ten o'clock. His Excellency Lord George William Russell, kindly gave me a note of introduction to Sir John Frost, the late secretary of the Medico-Botanical Society of London, who was then residing at Baden, and practising as a physician. This gentleman furnished me with several notes of introduction, to some of his Botanical friends, and also kindly shewed me the different ob-

jects of interest about the town; amongst which was the fountain of mineral-water, so much celebrated, for various diseases. It is of a very high temperature; so much so, that I was unable to drink a glass of it, without first letting it cool; from the appearance of the fountain, one would imagine that a strong fire was burning under it. From the baths we proceeded to the castle garden, and from hence, a considerable way up the hill, where is a most delightful prospect of the town, and its very romantic scenery. The old castle forms a prominent object of attraction, which, with the tremendous precipices of rock, and plantations, render this spot the most picturesque that I had previously met with on my tour through Germany.

An excellent promenade, called the English garden, with neatly kept walks and pieces of lawn, is much frequented by the inhabitants and visitors. Situated in the promenade is a magnificent building called the "Conversation House," with numerous orange trees arranged in front of it.

In the interior, I was much surprised to see in a very capacious room, splendidly furnished, a large concourse of ladies and gentlemen, during Sunday, very busy at the gambling tables; in fact the ladies appeared to be fully as expert gamblers as the gentlemen. I also made a visit to the convent, where two skeletons of saints decorated with numerous pearls, rings, and other costly ornaments are exhibited; the

skull and teeth appeared to be in pretty good preservation, but these superstitious decorations, so perfectly incongruous, might be well dispensed with. The number of strangers calculated to have visited Baden, during the season of 1835, are said to have amounted to thirteen thousand. The scenery for a great part of the way from Carlsruhe to Baden, is considerably varied, and the old castle of Eberstein appearing on an eminence, with well planted hills, forms a lively contrast. We also passed through a handsome town called Rastadt, situated on the river Murg, where a palace, belonging to the grand duke of Baden, appears conspicuous from the road.

Sept. 14th. I called this morning on Mr. Kennedy (brother to the Marquess of Ailsa,) and delivered to him a note of introduction that I received from Lord G. W. Russell. Mr. Kennedy very kindly accompanied me to the Botanic Garden, and introduced me to M. Held, the gardener, a very intelligent man; here the enormous height that the *Melaleuca stipulacea* had attained, which was nearly forty feet, is truly astonishing. Various other *Melaleucas* and *Banksias* were nearly as high; the *Dracæna Draco* (Dragon-tree,) was about twenty feet in height; and the *Pomaderis apetala* almost thirty feet. In this garden are various ranges of houses for the cultivation of tropical and other green-house plants, which are extensively cultivated. The houses have all dark roofs, with glass

only in front; yet the greater part of their inmates looked very healthy, particularly the greenhouse plants; but these had the advantage of being exposed to the weather during the summer months. Various pits were also in this establishment for the growth and protection of the half-hardy species. The *Succulentæ* are extensively cultivated; there are nearly one hundred and forty species of *Mesembryanthemums*, and about one hundred different kinds of *Aloes*, besides a pretty good collection of the *Cacteæ*. The *Rhododendron* and *Azalea*, are cultivated out of doors, which is rarely the case in any other garden in Germany.

The herbaceous ground is formed into oblong squares, and these again divided into narrow beds, which are well stocked with a great variety of hardy flowering perennials. The whole of this botanical department was remarkably neat and clean, having, it is understood, been much improved since M. Held was appointed. It appeared to me, however, to be much too crowded with these heavy looking houses, which are too numerous for a space of ground, undoubtedly too contracted and confined for such a collection of plants.

The park, or pleasure-ground, adjoins the garden, and although of a dull flat surface, yet it contains many very fine specimens of ornamental trees and shrubs. I observed, for instance, the *Salisburia adiantifolia*, sixty feet high, and several very large

tulip trees, and the *Sophora Japonica;* a fine specimen of the *Acer dasycarpum,* measured no less than a space of ground of twenty yards regular diameter. I was much pleased with a small flower garden, close to the palace windows, which was well stocked with flowers in full bloom. The grounds are laid out with numerous avenues radiating from the palace, which extend in a straight line for a considerable distance; I reckoned twenty-seven of these avenues, which had certainly rather an imposing effect, and various walks and rides that branch off through the grounds in different directions. There is also an extensive piece of ground enclosed with a high wall, occupied as a nursery, and well stocked with various hardy species of trees and shrubs. The front of the palace, next Carlsruhe, was ornamented with large orange trees. The orangery was a large building, the front of which was well covered with grape-vines in a prolific state.

Sept. 15th. Left Carlsruhe at six o'clock, a.m. for Heidelberg, passing through a fine fertile country, chiefly occupied with green crops. The mangel wurtzel, Indian corn, and fine crops of tobacco, are cultivated here, as well as in many other parts of Germany. Arrived at Heidelberg at eleven o'clock, and proceeded to the Botanic Garden, which has been only recently established, and contains a neat range of hot-houses, about one hundred and sixty feet long, besides a large sized pit in front of the range, one hundred feet long. This garden, although

small, is pleasantly situated, and well arranged. In the centre is an oblong piece of water, the banks around which are considerably elevated, and planted with standard fruit trees, such as peaches, apricots, plums, and pears. The garden forms an oblong square, with a range of hot-houses and gardener's house at the north end, close to the Heidelberg Gate. These hothouses were the best and neatest-built that I had met with in Germany, and contain a pretty fair collection of plants, with some very fine species of *Cacteæ*. Along by the east side of the garden is an avenue of very fine specimens of the *Robinia inermis*, which is also continued along the south side of the town for a considerable distance.

I next proceeded to Schwetzingen, another magnificent establishment, belonging to the Grand Duke of Baden. The palace and gardens are situated about five English miles from Heidelberg, and are unquestionably well worth the stranger's visit. In the approach to them by an arch-way at the palace, we have a view of a large circular piece of ground, divided into various divisions, in which are cultivated a good collection of flowering plants; there are also in this spot a number of fine orange trees, arranged along the edges of broad gravel walks; several of them forming a straight avenue, extending in various directions. The centre walk or avenue, leading from the palace, is terminated by an extensive sheet of water, where is placed a fine group of

sculpture, as well as another at the commencement of the avenue, at the end of the grass, next to the circular piece of ground, where the orange trees are arranged. On each side of this principal avenue is situated an oblong piece of ground, laid out in the French style of gardening, with numerous straight walks, and circular spaces at their junctions. The exterior of the ground, and that by the lake, is laid out in the English style, and consists of various clumps of trees; and the very fine irregular sheet of water has really a very good effect.

I was much pleased with a very fine ruin, which is ascended by steps to a very considerable height, from whence is a delightful prospect of the gardens and adjoining scenery. The Temple of Apollo, with the stupendous blocks of rock, and the water dashing against them, is another object deserving of notice. The Temple of Minerva is also a very pretty erection. A Roman aqueduct forms a very prominent object of attraction, but at this season of the year it appeared to be but indifferently supplied with water, which might be occasioned by the long and universal drought. A Temple Botanique, and a very handsome Kiosk, formed objects of interest and ornaments to the garden. An extensive arched trellising covered with creepers also attracted my notice: in it were numerous arborial openings on both sides.

The collection of Cape and New Holland plants is

pretty extensive, and numerous species of the *Genus Erica* are also cultivated. In the kitchen garden various pyramidal-formed pear trees are grown; and the hothouses are of a better description than are usually to be met with in Germany; the south-side glass, and the back opaque, with span roofs. The pine-apples here were the best that I had previously met with during my tour in Germany. To give an accurate description of the various objects of interest that are to be seen in these grounds would require one well acquainted with the premises, and several days' actual residence on the spot. The orange houses are substantial built houses, with dark roofs, and the collection of trees, from their appearance, from four to five hundred, which were in a healthy state.

Having a letter of introduction from Sir John Frost and M. Kilter from the neighbourhood of Vienna (who visited Woburn Abbey last summer) to the principal director, I experienced the greatest attention from him; the greatest pains were taken in pointing out to me every thing worthy of notice.

Returned to Heidelberg, and visited the ruins of an old castle, situated on the face of a hill overlooking the town, and the river Necker, and surrounded by high hills well planted, which form an eminence considerably above the castle, where there is a platform or resting place: the view of the extent of country and its romantic scenery is really grand. On

the top of two of these hills are high towers, the prospect from which must be still more extensive. On approaching the old castle, I was agreeably surprised to observe some fine walks, with a collection of trees or arboretum, with printed labels attached to them, and the ground in good order. From this we still continued to descend to the old castle, which, even in its present state, must strike the stranger with regret that such a magnificent building should have been permitted to go to decay, particularly as the stone work appears in a good state of preservation. The prospect from the terrace, on the north-side of the castle, is really grand, commanding the circuitous course of the Necker, the lofty and undulating hills on each side, which I imagine must be elevated at least two thousand feet above the level of the site of the castle.

In the interior of the building is the celebrated *Heidelberg tun*, which was formerly used in making the Rhenish wine, with the great machine that was in use for that purpose, and from its size the quantity made daily must have been very great; near to it stands a figure of one of the wine makers, who was in the habit of drinking fifteen bottles every day. The approach of night prevented me from inspecting the interior of this old castle so minutely as I could have wished. Descending from a hill considerably elevated above this building, I passed through a grove of fine trees (sweet chesnuts) all in full bearing.

The country and romantic scenery in the vicinity of Heidelberg pleased me more than anything of the kind I had previously met with.

Sept. 19th. Left Heidelberg at six o'clock a. m. for Frankfort, the road winding along the river Necker, for a considerable distance, through a flat country to the left; but the high hills on the right as we passed from this to Darmstadt formed a pleasing contrast. The scenery for the first ten or twelve miles is very picturesque, from the high undulating hills, having numerous old romantic castellated ruins on their summits, or commanding points, which form prominent features of attraction. These hills are likewise well planted with forest trees; and large tracts are under vineyard culture.

Arrived at Darmstadt at half-past one o'clock. I was much pleased with the cleanliness and elevated situation of this town, which is said to contain above twenty thousand inhabitants; the houses are handsomely built, the streets wide, and in good proportion to the height and size of the houses; they have also flag pavements, which is a rarity in Germany. The opera-house is a splendid building, as well as the cathedral. The palace is also a fine old building, and has attached to it an extensive pleasure ground and kitchen garden.

Having but a very short time to stop here I made but a hasty visit through the gardens. The kitchen garden walls were well stocked with trees in

full bearing, and large crops of vegetables appeared to be extensively cultivated: from thence I went to the extremity of the grounds, near which is a small herbaceous ground, with a good collection of plants in it, but I observed but little in the ornamental way in the arboretum department.

About the centre is prettily formed, although dirty, a sheet of water, with a fanciful boat, for passing to and from a small island in the centre. The grounds are very flat and not varied, but possess numerous walks and rides which are frequented by the inhabitants.

I here observed a large number of horses, belonging to the Grand Duke, passing through the town to the Ducal stables. There are military barracks, and a large establishment of soldiers stationed here. This is evidently not a town of trade, but is principally occupied by the military.

Left Darmstadt at three o'clock for Frankfort; the country betwixt these towns is not much varied, but the soil appears very fertile, and produces good crops. I was, however, quite astonished at the number of carriages and other vehicles passing and re-passing betwixt Frankfort and Heidelberg; the road appeared to be nearly as much crowded as any of the English roads leading to London, and amongst these travellers were many English families.

Arrived at Frankfort at six o'clock in the evening; the hotels were all so crowded with strangers

that it was with difficulty I procured a bed, but at last the landlord of the Hotel d'Angleterre obtained me a room in a private house.

Sept. 17th. In the morning I visited the Catholic cathedral, which is said to be one thousand years old, and contains a curious clock and almanac, made and placed in it about four hundred years ago; and then proceeded to the banking-house of Messrs. Koch and Co., and delivered to them a letter of introduction from His Excellency Lord G. W. Russell. They kindly furnished me with notes of introduction to several of the best gardens in Frankfort. I then visited the nursery gardens of M. Rintz, which are situated in the suburbs of the town, and contain about eighteen English acres, chiefly occupied with fruit trees. There are also several hothouses and pits for Cape and other plants, which are pretty extensively cultivated, with a good variety of *Ericas* and other greenhouse plants, as well as several fine specimens of *Cacteæ*, and a very extensive variety of the *Camelliæ*; but unfortunately none of these being at this season in flower, I had not the pleasure of seeing M. Rintz's celebrated variety, which is said to be very fine. This gentleman then accompanied me to the garden of M. Andreæ Willemer, which is close to the town, but is very limited in extent; it contains a very good greenhouse, and low pits and frames, which were then well stocked with a very fine collection of *Cacteæ*, amongst which were many very

scarce species. This gentleman devotes much attention to the cultivation of this tribe of plants, and appeared to put a higher value on many of them than they are actually worth; for instance, the *Cactus Senilis* he would not part with for fifty pounds, although possessing duplicates. There was also a good assortment of Cape plants and a number of *Ericas*, which are now beginning to be more extensively cultivated in Germany than they previously were.

I then paid a visit to the Frankfort Botanic Garden, which is of very limited extent, and its collection of plants also very contracted. There is, however, attached to it, the Senkenberg Society, which contains a splendid collection of objects in natural history, such as birds, fishes, shells, minerals, and animals, which are well worth the stranger's notice.

From this I proceeded to the gardens of M. Gogel, situated about four English miles from Frankfort, containing twenty-four German acres, with several hothouses and pits for the growth of the pine-apple and other tropical plants, which are extensively cultivated here. This gentleman has a very fine collection of the hardy grapes on the garden walls, with a large space of vegetable ground, well cropped. The lawn in front of the house appears, from the River Main, to much advantage, as well as a fine avenue of lime trees, that have grown to a large size. At the lower end of

this avenue is a fine vista of the river and packets, or boats, that pass to and from Frankfort and Mayence.

On my return, I called at the villa garden of M. Stern, which is a pretty little spot, with a great variety of pelarganiums and dahlias, and other green-house plants, and contains some small green-houses and pits for their protection; there is also a good collection of camellias, all in a healthy state.

Adjoining this is another villa, belonging to M. Cronelius, that has also several good hothouses and pits, with a large variety of *Ericas*, *Camellias*, *Dryandrias*, and *Geraniums*, as well as other New Holland plants. There are likewise several espalier divisions, in which the pear tree is extensively cultivated, and appeared to be in a very prolific state. There is a considerable extent of ground under kitchen cropping, and also a pleasure ground, which was very well kept.

The garden of Baron Rothschild, close to the town of Frankfort, is undoubtedly the best in this neighbourhood that came under my observation; it contains thirty-five German acres, with several green-houses, besides an extensive range then building, about two hundred feet long, which was also intended for plants, and is divided into seven apartments, in order that those kinds that require different temperatures may be kept separately; this range when completed will have a very fine effect. In front of the mansion were placed

two large stands well stocked with geraniums, and some very good orange trees, in tubs, which are removed from this site to the green-house early in autumn. I here observed a very fine specimen of the *Araucaria excelsa*, which was beautifully feathered to the ground; this is unquestionably one of the finest specimens of this plant that I have seen on the continent or in England, with the exception of that at Dropmore, which is much finer in every respect. Baron Rothschild's *Araucaria* is little inferior to the one at Prince de Linge's at Belial.

Opposite to the house is a prospect tower, that commands a fine view of Frankfort and surrounding country; there is also an arched walk completely covered with grape vines. The grass lawn was well kept, and various clumps of trees and shrubs dispersed through it. A small piece of water is enclosed at the lower end of the ground for water fowl. In this garden I observed a good collection of green-house plants and *Ericas*.

The fortifications that formerly surrounded the town are now demolished, and formed into a public promenade for the inhabitants, and are well laid out, with various clumps of trees and shrubs, broad walks, and benches.

Frankfort is a town of great traffic, and is said to contain about 40,000 inhabitants.

Sept. 18th. Left Frankfort at ten o'clock for Mayence, and passed through a fertile sandy country,

which is well stocked with grape vines, but the country not much varied; the scenery as we approach Mayence is more picturesque, particularly when we get in view of the town. We pass through a handsome barrack, situated on the verge of the river, proceeding across a long wooden bridge that leads to the town. Opposite to this wooden bridge, are placed seventeen watermills for grinding flour, which were then busily at work.

The town is surrounded by very deep rampart ditches, faced with strong stone walls, a very good promenade, and a number of small gardens with clipt hedges, near the edge of the Rhine, where there is an avenue that extends along its banks formed by large trees of Poplar and Robinias. At a short distance from Mayence, but on the opposite side and close to the banks of the river is a very fine old castellated building, and a small village adjoining, which form a prominent feature in the scenery from the Mayence bridge.

Sept. 19th. Left Mayence per steam packet for Bonn. For the first two hours, we made scarcely any progress, owing to the dense fog, which we were all anxious to see disperse, in order that the beautiful scenery might be seen to full advantage: it was however not before nine o'clock, that the banks of the Rhine were quite clear, when the packet began to make a rapid progress, and passing rapidly along

between numerous stupendous rocks, old castles, and small towns situated close by the river side.

The banks of the Rhine are extensively cultivated as vineyards. When we arrived at Katz, which is considered about the middle of the best scenery, we met the other steam packet, coming up at Werlau. The scenery here is truly grand; the high mountainous rocks and old castelated ruins, with the various undulations and other objects, render this region highly picturesque. There is a pretty town close by the water edge, with white houses, and corresponding village on the opposite side, and another appearing just at the extremity of a deep valley in prospect. The old castle called Marksburg, is a prominent object, but to attempt to describe or enumerate all the various features of interest that come under observation in passing along the Rhine, would be an endless task. The scenery at Coblentz is very beautiful, with its bridge of boats across the Rhine, similar to that at Mayence. A large rock called the Stromberg, is very picturesque, with the castellated ruins at the top, and several other rocks of smaller dimensions in its vicinity, nearly opposite to which the Rhine surrounds a small island. This may be considered about the last of the romantic scenery that comes in view, as we pass down the Rhine.

Arrived at Bonn, about five o'clock, where I experienced some difficulty in getting a lodging, in consequence of the great meeting of scientific pro-

fessors having been here congregated. After at last finding admittance in a hotel, I proceeded to the Botanic garden, which is situated about a mile from the town, surrounding the south and east sides of the university, and containing a very handsome range of hothouses, from three to four hundred feet in length, which also form nearly a line, or a range, with the principle front of the university. The hothouses are in five divisions, and contain an extensive collection of *Ferns* and *Graminea*; many of the stove plants were in a very luxuriant state, and looked very healthy. Behind this range is the annual ground, where the different species are cultivated, which appeared to occupy about an acre: there are several low pits placed in this department, for the growth of *Cacteæ*, and *Orchideæ*, and other dwarf-growing species; but the collection of *Cacteæ* and *Orchideæ* is very limited. Immediately in front of the range of hothouses, is an arboretum of hardy trees and shrubs, much too crowded, and planted too close to the hothouses, and is continued in a manner round the two ends and south side of the garden. Opposite the principal front of the university, is arranged the collection of *Herbaceous* plants, according to the natural system, but the beds are all of an oblong form, with broad alleys or footpaths, betwixt them: an extensive collection of the hardy flowering perennial plants was grown in the *Herbaceous* ground, but the variety of hardy trees and shrubs appeared to be very limited. There

were placed along the front of the university several clumps of green-house plants, and orange trees.

The university was formerly a royal palace, but the lower apartments are now devoted to collections of natural history; the length of the front measures eighty eight yards, and appeared to be about square, with an inner court. On my return, I met with professor Treveranes, and gave him a letter of introduction that I had from Sir W. Hooker. I learned from the professor, that the prince of Salm-Dyck was then in Bonn, attending the scientific meeting, and if I did not see him that evening, I should not be able to see him at all; having a letter of introduction to his highness from Sir W. Hooker, and from Mr. Sabine, and being anxious to see the prince, if possible, I made the best of my way back to Bonn, to the hotel where the prince was stated to be residing; but on enquiring there, finding he had gone out, I immediately proceeded in search of the prince to another hotel to which I had been directed. After waiting some time, I found his highness had not arrived, but was expected very soon. I therefore amused myself in looking through several splendid apartments which were then occupied by a large number of ladies and gentlemen, who meet at this hotel or club-house every night, to supper and various amusements. At last I was informed that the prince had just arrived, when I delivered my letters of introduction, and

apologised for intruding at that unseasonable time. The Prince appointed me to be with him at nine o'clock the following morning, when his Highness was pleased to give me a letter to his gardener at Salm-Dyck, directing him to shew me the grounds and collections under his care.

Sept. 20th. After my return from the prince, I made another excursion to the Botanic garden, where I again saw the professor Treveranes, who had not accompanied his learned brethren to Cologne, who to the number of about four hundred had departed that morning for that town.

I took a walk on my return from the Botanic gardens round the environs, and was much pleased by the objects of interest that displayed in different directions. The scenery around Bonn is particularly fine, and some good prospects from a hill, at a short distance from the town; but as I intended starting by the early steam packet, I had not time to reach its summit, although very inviting.

The Cathedral is a very fine building, and its interior handsomely fitted up.

The packet arrived at half-past two o'clock: I took my departure for Dusseldorf, and passed by Cologne, where, I imagine, there must have been several thousand people assembled on the harbour and bridge.

We now changed packets for one of less dimensions and splendour, and arrived at Dusseldorf about half-past ten o'clock. The scenery from Cologne to

Dusseldorf was flat, and but little varied; in short Bonn is the termination of picturesque scenery.

At Dusseldorf, I had but little difficulty in finding a hotel, as they were not so much crowded as at Bonn.

Sept. 21st. Started at six o'clock, a. m. for prince Salm-Dyck's Château, which is situated about ten miles from Dusseldorf, on the opposite side of the Rhine, which is crossed in a flat barge, and passes through the ancient town of Neuss, at which place Buonaparte's design of connecting the Rhine, Scheldt, and Meuse, is nearly completed.

The suburbs of Neuss abound in numerous vegetable gardens, enclosed with well clipt hedges. The ground in this part of the country, is a strong rich looking yellowish loam, and produces strong crops of corn, clover, and potatoes. The road however leading through a part of this country to the prince's palace, is very much out of repair, and appeared to have been neglected for a considerable time.

On arriving at the palace, I immediately found out M. Funck, the prince's gardener, and delivered to him my letters of introduction from the prince, and from M. Otto, of Berlin. The garden ground attached to this residence, contains one hundred and eighty German acres; the surface is considerably varied, and consists of numerous fine trees and shrubs grouped together on the lawn, the rising ground being judiciously planted with the loftiest growing sorts, and kept towards the extremity of the

arboretum; amongst these I observed some very fine specimens of beeches and oaks; the beeches were particularly fine.

I saw here the *Gleditschia tricantha*, 50 feet high, and the *Populus Canadensis* eleven feet in circumference, by about sixty in height; also a fine specimen of *Acer dasycarpum*. The trees in this arboretum are arranged according to the system of *Jussieu*; there is likewise a natural arrangement of herbaceous plants nearer to the palace and green houses. I here observed a good collection of *Pæonias*, but the prince excels most in the *Succulent* tribe of plants, such as the *Cacteæ*, *Mesembryanthemum*, and *Aloes*.

Although the *Cacteæ* are very numerous they were not such fine specimens as in the Berlin garden. A sheet of water encloses, in a manner, the greater part of the palace and its offices, and from the windows it has a very fine effect, with its bold sweeping banks extending along the arboretum, where a pretty wooden bridge appears in view. The hothouses are rather in a decayed state; but M. Funck informed me that the prince intended re-building them. In the greenhouse are some very rare specimens of *Yuccas* and *Aloes*. I understood from M. Funck that Mr. Hitchen, of Norwich, had the greater part of his celebrated collection from this garden, whence I also anticipate receiving, ere long, not a few rarities.

In going through the interior of the palace I saw a number of very old paintings, many of which

represented former princes of Salm-dyck, but they are not in a good state of preservation; the rooms and furniture are of antique appearance, as well as the exterior of the palace. After spending several hours in inspecting the plants and grounds, I returned to Dusseldorf, to see the botanic garden belonging to that town, which is certainly neither difficult to get over, nor to see its contents, the space of ground being very contracted, and the plants also few in number.

They principally consisted of annuals; with a few rare species of *Cacteæ*, not easily to be met with. I was, however, more pleased with the public garden or promenade, which surrounds the town, and is very extensive; it is particularlywell laid out with fine broad walks, clumps of trees and shrubs, and lawn intervening, and great variation of surface, with different points of view commanding fine prospects of the Rhine, with its boats and steam packets.

There is in this promenade a fine avenue of *Populus dilatata*, as well as the *Tilia Europæa*, (Lime tree,) also several pieces of water, the outline of some formed with much taste and intricacy, while others are left rather formal; but, on the whole, little room is left for criticism. Dusseldorf is a handsome town, and contains about 18,000 inhabitants; with good streets and well built houses.

Sept. 22nd. Left Dusseldorf by diligence at eight o'clock, a.m.; and passed by the palace of prince Frederic, which is situated close by the road side,

in front of which the orange trees and sheets of water appear very conspicuous. The gardens are said to contain a good collection of plants.

Arrived at Cologne at one o'clock. This town is of considerable extent and traffic, and has a popula- of upwards of 50,000 inhabitants. The great object of attraction for the stranger is the magnificent church, or cathedral, one of the finest in Europe, the dome one hundred and eighty feet high, and the interior illuminated with beautiful stained glass windows; the portraits as large as life, and magnificently executed. I was, however, more pleased by the exquisite architecture of the exterior; when finished, the effect will be grand in the extreme. On the south side of the town are strong fortifications, opposite to which is a promenade, that runs along a narrow slip of plantation on the exterior side of them. There are also numerous fields for the growth of vegetables. I here observed a small nursery garden well stocked with fruit trees and shrubs. At a short distance from this I saw a large building which I concluded to be a military barrack or magazine, which was guarded by soldiers. By the time that I had completed my survey of the town, I found that it was approaching to the hour that the diligence was to leave for Aix-la-Chapelle. I started about seven o'clock in the evening for this town, where we arrived at four o'clock the following morning.

Sept. 23rd. Having a few hours to stop before the diligence set out, I proceeded to the cathe-

dral, where the celebration of the mass was performing. It is a very splendid building, the interior highly ornamented on the cieling with fine fresco paintings.

The town hall, or now police office, is also a very magnificent building; I observed some fine paintings in the interior.

The several celebrated mineral springs in this town are nearly as hot as those at Baden; leading from the Baths, is a handsome street and a number of good houses, that appeared to have been recently erected. At a short distance from the town is a prettily planted hill, which must command a fine prospect from its top of the surrounding country and scenery; but my time would not permit a visit to it. In the vicinity of Aix-la-Chapelle are numerous market gardens, but I observed no nursery stock. The road leading from hence to Liege is considerably varied, and the ground apparently of a rich fertile nature. The town of Liege is situated in a beautiful valley, at the junction of the river Meuse with the Ourthe, and surrounded by hills and fertile pasture, the latter being watered by three rivers, the Ourthe, the Vestre, and the Meuse.

This city contains a great many very fine built houses, and is much celebrated for its various manufactories, which principally consist of marble, coal, iron, and various other hardware articles. The old palace is a fine antique building of the Ionic order;

the different apartments in it were then undergoing a thorough repair. The viranda that surrounds the inner square is now formed into an arcade of shops. From this palace I proceeded to the old citadel on mount St. Walburgh, which commands a fine view of the town, the river Meuse, and the surrounding scenery, for several miles in extent.

Sept. 24th. Went this morning to the cathedral, the architectural arrangements of which are very imposing; the interior decorations are well deserving of the stranger's notice, as well as its richly ornamented ceiling, and beautifully painted windows, and several fine pictures and groups of sculpture. I next proceeded to M. Makoy's nursery, which is situated about two or three English miles from the town. It contains an extensive collection of plants, which are extremely well grown, and all in fine saleable condition. The spirited proprietor was then erecting another extensive range of hothouses, and heating it with hot water, which, together with the numerous houses he has already, will extend his plant houses to about six hundred feet in length. In this nursery I observed one of the best collections of green-house plants, that I met with on the continent; they were undoubtedly not surpassed in their growth by any collection that I have seen; the *Camellias*, *Cacteæ*, and orchideous plants, also form a prominent feature in this establishment, as well as the collection of *Azaleas*, and *Rhododendrons*, which were all in fine

condition, the nursery ground in good keeping, and well stocked with fruit trees.

On my return I visited the botanic garden, which surrounds the university, and contains nearly two English acres of ground, in which is cultivated a good collection of hardy perennials, and *Gramineæ* plants. There are also three hothouses for the growth of tropical and Cape plants. In the stove I observed a very fine specimen of the *Dracæna Draco*, (Dragon tree,) which was twenty two feet high; the *Caladium lacerum* had also attained the height of fifteen feet; there was likewise a very fine plant of the *Crinum amabile*, then in flower. The university is a magnificent building, and is at present having large additions made to it.

I started at twelve o'clock for Namur. The road, leading along the river Meuse, is extremely picturesque, the large rocks and varied surface give it a fine appearance. Along the banks by the road side I observed the common box growing in great abundance. We skirted an extensive tract of vineyards, which are cultivated along the banks or rising ground on the right side of the river Meuse, as we pass from Liege to Huy. At this town we cross the river by a stone bridge. Huy contains a number of well built houses, and is pleasantly situated, being surrounded by lofty rocks, with a strong fortification. The road skirting the river Meuse from Huy to Namur, appeared to me to be of the most romantic and beautiful sce-

nery that I had previously met with, particularly a part of it, when approaching within a few miles of Namur, where the rocks and varied surface give it a most interesting appearance. In a picturesque spot on this line of road we have in full view the summer chateau of the prince d' Aremberg, as well as various other handsome residences.

Arrived at seven o'clock in the evening at Namur, when there commenced a tremendous storm of thunder and lightning and rain, which continued for several hours. Namur is a strongly fortified town, situated in a valley, at the junction of the rivers Meuse and Sambre. The cathedral is an object of interest; but as I left the same evening by diligence for Mons, I was unable to see this noble structure.

The view from the bridge opposite the fortifications has a grand appearance to the eye of the stranger. Left Namur at half past nine o'clock, and arrived at Mons at ten o'clock the following morning.

Sept. 25th. Mons is a strongly fortified town, and abounds with market gardens in the environs. It appeared to be the centre of a great agricultural district. Coal-works are likewise very abundant in its vicinity.

I proceeded from this town to Belœil in a cabriolet; passing through a fertile country, and a fine plantation belonging to the Prince de Ligne, which contained some fine beech trees, with numerous avenues, but a horrid road; the wheels of the cabriolet sinking up near to the axeltree for the greater part of

the journey. On my arrival at Belœil I was unfortunate in not finding the Prince at home, as I had a letter of introduction to his highness from Sir Robert Adair. I found some difficulty in obtaining admittance into the gardens; but on the arrival of a gentleman belonging to the establishment, he gave orders to one of the guards to conduct me through the grounds to the kitchen garden. The palace is surrounded by water, and at the principal front is a large oblong sheet of water, with a large mass of sculpture at its extremity. The prospect from the palace windows, along this piece of water and the avenue, which is formed by high clipped hornbeam hedges, as well as by the lime-tree, appeared very fine, and extended for several miles in a straight direction. The grounds are very extensive, and intersected by numerous avenues of hornbeam hedges, which are of great height, with various arborial windows cut in them from eight to ten feet from the ground. In short, the number of avenues and well-clipt hedges that lead in every direction through these grounds, render it a place well worthy of a visit, and constitute a different feature in gardening from what is generally to be met with elsewhere.

The Prince has an extensive range of houses for the growth of exotics, all connected with a large opaque-roofed orangery, which forms a centre to the range; the wings are of different heights, and have a very good effect. I here observed a more magnificent

Araucaria excelsa than I had previously seen, with the exception of that at Dropmore, which is much larger, and more beautiful. This orangery is a capacious building, principally erected with red brick, with upright lights only in front, the roof being slated. It contains a large assortment of orange trees, in good health. There is also a house devoted to *Camellias*, containing about two hundred and forty sorts. The botanic stoves are well stocked with healthy plants, but there are very few of the new or lately introduced species amongst them. I observed here a very fine specimen of the *Coccoloba pubescens*, the leaves of which appeared to me to be more luxuriant than on any other plant of this species that I had previously seen. The *Urania speciosa* was also particularly fine, and several other kinds in a flourishing state.

In the same compartment with the plant-houses is placed an extensive range of pine-apple and melon-pits, as well as several structures of peach and vine framing. In the kitchen-garden a large assortment of the hardy frûits are cultivated, especially pears and apples; the former are trained as standards along the borders, in a pyramidal form, and appeared to produce excellent crops. The kitchen-gardens and pleasure-grounds, although very extensive, were in a very rough state; the only part kept in good order seemed to be the plant-houses and hedges.

From Belœil I proceeded to Ath, a very strongly fortified town. The country from Prince de Ligne's to Ath is very fine, and consists of a rich agricultural soil in a high state of cultivation, producing excellent crops. The town is said to contain about 80,000 inhabitants; the ancient tower of Brabant forms a prominent object, and the church of Julien is well worth notice.

Sept. 26th. Left Ath at eight o'clock in the morning, in a cabriolet, for Enghien, which is only a small town; but the fine park, and gardens belonging to the duke d' Aremberg, which are situated close to the town, are objects of general attraction. Unfortunately the castle or mansion was burned down during the late revolution, and his highness now chiefly resides in an ancient mansion near Louvain. The duke has lately built a very fine range of hothouses for the growth of tropical plants; they are four hundred and sixty feet long, and are divided into several divisions; the centre, which is occupied as a stove for the more lofty of the tropical plants, is sixty-six feet long, thirty four high, and twenty five wide. In this house the *Urania speciosa* had attained the height of thirty three feet; the *Displotanium argenteum* also thirty three feet; this is a beautiful *Palm*. The *Caryota urens* had likewise grown to the height of thirty two feet; the circumference of its stem at six inches from the ground is three feet three inches, gradually tapering towards the top.

Cycas circinalis, fourteen feet in height and very healthy; the *Corypha umbraculifera* twenty four feet in height, a very beautiful palm; and a very fine specimen of the *Latania rubra*, the *Carolina princeps*, had reached the top of the house, and had been cut back. Numerous other species were here in a very healthy state, and a very extensive collection of Cape and New Holland plants. This extensive range is handsomely finished with cut stone parapet walls, and projecting cornice over the top lights. There is another range about one hundred and thirty feet long, with span roof, separate from the principal range, in which are cultivated pines, bulbs, and various other plants. In front of these ranges of hothouses is a large lawn, with several clumps of the different species of hardy plants, which are also extensively cultivated in this establishment. A handsome temple is situated at a short distance from the gardens, which is surrounded by water, from this temple diverge seven fine beech and horse-chesnut avenues, looking in as many directions; between each are smaller avenues parellel to them, which are terminated by handsome stone vases. At a short distance from the avenues is the orangery, which is of large dimensions, with an opaque roof; The orange trees were very healthy, and formed an avenue in front of the house. M. Bedinghans, the gardener, informed me that they only shifted them once in five years, in a mixture of loam and leaf-

mould, with a little cow-dung intermixed. At the back of the orangery are several arched walks, formed by hornbeam hedges, with arborial windows cut in them; they form a pleasant and shady promenade during the summer months. The park is also very extensive and considerably varied in its surface.

M. Bedinghans is a native of Germany, and a very intelligent young man, seemingly much attached to his business. He accompanied me to the nursery garden of M. Parmentier, which is situated in the town of Enghien. In this establishment, there is a celebrated collection of plants, amongst which I observed a fine specimen of the *Melocactus mitriformis* which measured three feet in circumference, and eighteen inches in height; and *Melocactus hystrix* also a very fine plant. The *Echinocactus boutillieri*, is a beautiful specimen; *Cereus bonplandia, Mammillaria acanthoplegma, melocactus macrocanthus;* for a plant of this latter species M. Parmentier asked three hundred francs. The *Zamia furfuracea* is also very fine; as well as beautiful specimens of the following, *Wallichia caryotoides, Borassus flabelliformis, Latania glaucophylla, Pandanus turbinatus, amaryllifolius, fœtidus, bromelifolius, glaucus, candalabrium.* The *pinus Damara* M. Parmentier valued at fifty guineas, and the *Magnolia plumieri*, from the Island of St. Domingo, at eighty guineas: the *Butea superba* a fine plant, and fine specimens of the following species: *Sterculia villosa, Stanhopea occulenta, Careya sphærica,*

Theoprastus Americanus, *Gesnera barbata*, *Boronia grandiceps*, *Pinus pinnata*, and *Mexicana*; with numerous other rare species. Above four hundred sorts of *Camellias*, and upwards of five hundred kinds of *Cacteæ*, are cultivated in this fine collection.

The hothouses are very extensive, but getting rather into a decayed state, and are not kept in good repair. After visiting this establishment, I started by the diligence for Brussells, where I arrived in time to see a splendid display of fireworks, which was exhibited about ten o'clock; the town was likewise brilliantly illuminated in celebration of the late revolution. It contains a number of fine capacious streets, and well built houses. In the course of the present year, 1835, it was stated that not less than thirty thousand strangers had visited Brussells.

Sept. 27th. Having a letter of introduction from His Excellency Lord G. W. Russell to Sir George Hamilton, I waited on him this morning; and afterwards proceeded to visit several of the churches; amongst which was the celebrated Notre-Dame-de-la-Chapelle, which is a beautiful Gothic structure. The marble altar, which is executed from the designs of Rubens, is extremely beautiful, as is likewise the pulpit. St. Michael's church is also a fine Gothic building. I visited this in the evening, whilst they were engaged singing, and various clergymen were then present. This ancient structure is richly ornamented with beautiful pictures and painted glass windows. The oak pulpit attracts much attention on ac-

count of the richness of its carving, which represents the expulsion of Adam and Eve.

I also visited the Duke d'Aremberg's town-house, which is much celebrated for its library and Antiquities, and contains several fine paintings in the various apartments, together with a collection of Etruscan vases, and a head of Laocoon. Attached to this mansion his grace has a very fine riding-house, where several paintings were deposited. I next proceeded to see a representation of St. Petersburgh, which was then exhibiting in Brussells, consisting of a model of the various streets, squares, houses and gardens of that splendid city, which appeared to attract many visitors.

I proceeded in the afternoon to the Botanic Garden; but as it was wet I was unable to find any one to accompany me through the grounds, owing to the absence of the gardener; I therefore deferred going through them until a better opportunity, when I paid them another visit.

Sept. 28th. Started at six o'clock in the morning by diligence for Waterloo, where we arrived at half-past eight; and having procured a guide, I was conducted over this celebrated field of action, which is now all under a fine system of agriculture. I proceeded to the noted chateau at Hougoumont, which is enclosed by a brick wall, and still exhibits the marks of bullets. About the centre of the field of battle is a large mount, raised in commemoration of that eventful day; it measures 1680 feet in circum-

ference at the base, and is about 200 feet high. On the top is placed the Belgic Lion, said to weigh 48,000lbs.

On my return through the little village of Waterloo, I visited the church, which contains a large number of tombs, in memory of the British officers who fell in the field of battle.

I got back to Brussells about one o'clock, when I proceeded to the palace of Lacken, and having a letter of introduction to the gardener, from Mr. M'Intosh at Claremont, ready access was obtained to the gardens and grounds attached to this royal residence.

The palace stands on an eminence, commanding a fine view of Brussells and the adjoining country, particularly towards the south. The Antwerp road leading to Brussells is very conspicuous from several points of view from the grounds. From the palace towards the south the pleasure ground falls very considerably, and is much varied in surface, with several very pretty vistas, intersected by numerous walks, leading to different objects of interest. A large sheet of water, which appears in view from the palace windows, as well as from several other points in the grounds, forms a very pretty feature: over a part of this lake a fine wooden bridge crosses to a small island, and at the other extremity is a large grotto, formed by very large rough stones. Various improvements are in constant progress in the pleasure-ground, the whole of which is kept in

very good order, a circumstance of rare occurrence in Belgium. Two fine hothouses for plants have been erected during the last two years, from plans furnished by Mr. M'Intosh, the gardener at Claremont, who has also superintended the erection of several pine-pits, and contemplates the addition of an extensive range of forcing-houses at the King's palace of Lacken. From Mr. M'Intosh's well known abilities as a scientific and practical gardener, the superintendance could not be entrusted to a more suitable person.

The houses lately erected there are very neatly finished, and well adapted to their purpose, as well as the pine pits; the pine-apples grown here by M. Forkhall, the gardener at Lacken, were superior to any that I had previously met with on the continent. The young plants were also clean and healthy, and the exotic plants were in a very flourishing state, many of them in fine flower. There is likewise an extensive orangery, with a fine collection of healthy trees, which are much cultivated in Belgium, as well as in Germany. Near the orange-house were several clumps of flowering plants, amongst them some fine varieties of the dahlia. His Majesty's taste for plants and horticultural pursuits has not abated since he came to the throne; consequently numerous good plants are daily added to his collection. I observed a fine specimen of the *Kœlreuteria paniculata*, in fine flower, the *Catalpa*

syringifolia in great beauty, and several other fine growing hardy species.

Sept. 29th. Left Brussells, for baron de Hoogarts's, which is about nine English miles from the town, and whose garden contains several hothouses, in which are forced pines, grapes, and peaches. There are likewise several low pits for the cultivation of the pine, vine and peach. The pit used here for accelerating the peach, is nine feet wide, and the back wall five feet above the ground level; the front wall is only twenty one inches high, above the level of the ground, and consists of brick piers, with wood boards betwixt them, which are taken out, when the trees are removed or introduced into these pits, which operation is generally performed annually. Towards the back, is a flue for giving heat, which is applied as well as that from dung, for the forwarding of the fruit. There is also here a good kitchen garden, with a high circular wall, well stocked with good peach, apricot and pear-trees; amongst the latter I observed the *Beurre dore* very fine, *Glout Morceau*, *Cuisse Madame*, also fine showy fruits and prolific bearers, the *poire de melon*, *cale basse* were likewise fine fruit, and producing great crops. A fine collection of the standard pears, was also growing in this garden. Adjoining to it is situated the orangery, which stands on an eminence, and commands a pretty view of the grounds, and sheet of water. There is likewise a good collection of Cape and other plants from Botany Bay, and several clumps

of rhododendrons throughout the grounds in a flourishing state. The park is but of limited extent, considerably varied.

Adjoining to baron de Hoogart's, is the seat of count de Beaufforts, to which Miss Hoogart had the goodness to send their gardener to acccompany me. At this place is an old castle, situated by the side of a lake which was undergoing great alterations and additions.

The grounds attached to this ancient castle, although of limited extent, are much varied, and prettily planted, with different clumps of trees and shrubs dispersed through them. In the kitchen garden is a very handsome range of hothouses, about 120 feet in length, chiefly occupied with plants; one of the divisions is allotted for the pine apple, and in front of the range are also several pits, for pines, vines, and peaches. The pits used for the forcing of the vine and peach have each a flue that runs parallel to the back wall, and about eighteen inches from it. The front of those for the vine and peach has no front wall, only piers and boards fixed betwixt them, for the facility of removing and taking in the trees, which are planted betwixt the piers, when the boards are again placed in their former position over the stem of the trees, the roots running in a border on the outside of the pit.

On my return in the afternoon to Brussels, I visited the Museum, the collection in which is well deserving of notice; there is a numerous variety of

insects, a large collection of birds and animals, as well as minerals.

The picture gallery is a fine apartment, situated in the same building, and contains a large number of splendid paintings; a very magnificent painting of the Belgic revolution, which nearly covered the entire end of the gallery, was exhibiting, and seemed to attract a vast number of visitors. In another wing of the building is a repository of the various articles of Belgic manufacture, which was much crowded by spectators. I should imagine from the appearance of the numerous articles of commerce exhibited in these apartments that there can scarcely be a single article of manufacture that is not to be met with in this repository of commerce.

Having a letter of introduction from Mr. M' Intosh to Mr. Bigwood, a partner of Mr. Salter, the banker, in Brussells, I called on him in the evening, when he very kindly accompanied me to several of the diligence offices, and pointed out to me the best routes to take in order to save time; I then engaged a place for Paris for the following Saturday—a precaution found necessary, owing to the number of strangers then in Brussells; some of whom it was understood had been detained for several days in consequence of the diligences being so crowded. I also took a place for Ghent, the next town I intended visiting, which is situated about twenty-four miles from Brussells.

Sept. 30th. Immediately on my arrival at Ghent I proceeded to the nursery garden of M. Vangeert, which contains several hothouses, and a good collection of plants; there are also in this nursery several pits for the dwarf growing species; a good collection of *Camellias* appeared to be grown here, and also some *Cacteæ* and orchideous plants, with some *Magnolias* new to our English collections. The Ghent *Azaleas* have now become celebrated for the profusion of their flowers and various colours; they were in great abundance in the nurseries here, beset with flower buds. The *Magnolia conspicua* and *Magnolia norbertiana* are fine specimens. The soil in the vicinity of Ghent appears peculiarly adapted for the *Magnolia*, *Azalea*, and other American plants.

I next visited the nursery of M. Verleeuwen, which contains about two English acres of ground, and from eight to ten different small hothouses, with a fine collection of plants, that were all very well grown. A choice collection of *Camellias* is also cultivated here, as well as *Azaleas*, *Rhododendrons*, and other hardy plants well worthy of notice.

I then proceeded to the Ghent Botanic Garden, but was unfortunate in not finding M. Donkelar (the gardener) at home; this garden appeared to contain only from two to three English acres of ground: it is too much crowded with large trees and shrubs for so confined a space. There are two hothouses devoted to the growth of tropical plants

which were in a very flourishing state, but deficient of the more showy and new species of late introduction. The orangery is a large building, with Ionic columns and dark roofs; the trees appeared very healthy. There are also some low houses, or rather pits, in front of the principal range, which were well stocked with pines and low growing plants.

I next visited the nursery grounds of M. A. Verschaffelt, which are more extensive than any of the other nurseries I had yet seen, and contain about the best collection of plants in Ghent; he has some fine *Magnolias*, amongst which I observed the *Magnolia triumphans*, *Glauca*, *Arborea*, and *Gigantea*. His collection of *Camellias* is also very choice and deserving of notice, amongst which were the *Camellia compacta-rubra*, *Alexandria*, and *Magnificum*; a plant of this species he values at one hundred francs. There are also many other choice sorts; and his collection of Cape and New-Holland plants is likewise extensive: he is forming a collection of *Orchideæ*, and has erected a small house for their growth; he has likewise a good collection of *Cacteæ*, a choice assortment of the Ghent *Azaleas*, and other hardy plants, that appear to flourish well in Belgium.

The nursery I next visited was that of M. Verschaffelt, sen., which appeared to be about an acre of ground, but it contained a good assortment of *Rhododendrons*, also a large green-house with span-roof, as well as several other small houses; a great

stock of myrtles was likewise cultivated in this establishment. I next proceeded to the nursery of F. J. Spæ-fils, which contains about two acres and a half, with a range of hothouses one hundred and fifty feet long. I here observed a large stock of seedling *Azaleas* and *Kalmias*, also a well-stocked wall of trained peach trees. The standard fruit trees are also extensively cultivated, the situation being evidently well calculated for the growth of the different plants in demand in that country. After leaving this nursery I went to that of M. P. Byls, whose ground contains several small hothouses, but little of novelty in them; a few good hardy shrubs were, however, in the grounds. Attached to this nursery is a piece of ground under vegetable cultivation, which is extensively pursued in the neighbourhood of Ghent. I visited one or two other nurseries of small extent, but met with nothing of much importance in them, as they were more limited than either of those mentioned.

The cathedral of Ghent is considered one of the most handsome Gothic buildings in Belgium. The pulpit is a most beautiful specimen of workmanhsip, and is composed of white marble and richly-carved oak; near the great altar are magnificent antique candelabras, said formerly to have belonged to Charles the First of England, and were suspended in the old church of St. Paul's in London. Amongst the splendid paintings that ornament this cathedral are Lazarus rising from the dead,

by Otto Vennus, St. John the Baptist, the Virgin Mary, and the Paschal Lamb. Our Saviour is also represented on a throne holding a crystal sceptre. There are likewise two marble statues that represent the Apostles St. Paul and St. Peter, and numerous other beautiful paintings.

I took my departure at ten o'clock for Antwerp, where we arrived at six the following morning.

Oct. 1. Immediately on my arrival I proceeded to the top of the Antwerp steeple, or tower, which consists of six hundred and twenty two steps, and is four hundred and sixty-six feet in height, from the top of which a beautiful view of the town is seen, and a vast extent of fertile country. The Island of Walcheren and some of the Dutch steeples were pointed out to me in the distance. The citadel, which now appears to be all covered with grass, is very plainly seen from the top of this steeple, and the number of vessels in the Scheldt add life to the scene. The cathedral is reckoned one of the finest Gothic buildings in Europe; the interior is superb, and richly ornamented by the magnificent paintings of Rubens. I observed numerous very splendid marble columns. The altar is executed with marble, and ornamented with a representation of the Assumption. There is also a splendid painting of the Disciples at Emmaus, by Herreyns, portraits of Luther and Calvin, and numerous other celebrated objects, which to attempt to particularize would require one more intimately

acquainted with the subject than I can pretend to be. The painted windows are equally elegant.

I next visited St. James's Church, which is a very splendid building, and richly decorated with fine paintings and superb marble columns; the altar is inlaid with black and white marble, and supported by handsome twisted columns, and various groups of sculpture. The pulpit is most elegantly sculptured, and the beautiful specimens of carved oak are deserving of notice, as likewise is the splendour of the painted windows. There is also a fine picture of the Last Supper, by Otto Vennius, one of the Last Judgment, by Willemsen, the Tomb of Rubens, and a painting by him, of our Saviour on his mother's knees, surrounded by a number of figures, all of which are said to be portraits of the painter's wives and family. After seeing these two magnificent churches, I proceeded to the nursery garden of M. Vangeert, which is situated about two English miles from the city; it contains a very good collection of hardy perennial plants, as well as *Azaleas* and other American shrubs. The hothouses here are about one hundred and fifty feet long, in several divisions, and a good-sized pit for the half-hardy sorts. I here observed the best crop and finest bunches of hothouse grapes that I had previously met with on the continent. I was much indebted to M. Vangeert, jun., for his attention in accompanying me to the various gardens that he

considered to be most deserving of notice in the neighbourhood of Antwerp.

We proceeded to the Antwerp Botanic Garden, which is but of limited extent, I think not above an acre of ground in it. There is a green-house placed about the centre of the garden, but its occupants appeared to be of rather distant introduction, and little amongst them of novelty except a very fine specimen of the *Araucaria Braziliensis*, which was growing in a tub, and then standing out of doors.

There were likewise two or three other small houses for tropical plants, which were in a very flourishing state, particularly those cultivated in the stove.

They have in this garden a tolerably good collection of the *Genus Pinus*, amongst which is a dwarf sort, named there the *Pinus monstrosa*, but it appears to be only a variety of the *Pinus cembra*. It formed a very close bush, not exceeding two feet in height.

The next garden we visited was that of the late M. Jean Veanhal, which, during his time, was much celebrated for rare and good plants. Although there was but a small piece of ground in this garden, yet it contained a good collection, and several very good hothouses, in which were cultivated pine-apples and other tropical plants, which were in a very flourishing state, and the whole neatly kept.

We next proceeded to M. Moen's nursery ground, which is also but of limited extent, but contains a

number of good *Magnolias*, *Azaleas*, and other hardy plants, as well as many good greenhouse species. In this nursery there is a fine collection of *Camellias*. M. Moen informed me he had about two hundred seedling varieties and species. I saw here a fine specimen of the *Camellia reticulata*, about five feet high; M. Moen valued this plant at sixty guineas. There are some pretty good greenhouses in this nursery, also a good collection of pears that were in full bearing, and producing fine crops.

We proceeded next to the seat of M. Caters De-wolfe, which is several miles from Antwerp; the grounds attached to this residence are prettily laid out, particularly a sheet of water, which is amongst the best I have seen; it is formed so as to produce a picturesque effect from several points of view. At a contracted part of it a wooden bridge is constructed across, springing on both sides on elevated well-formed artificial pieces of rockwork. In the pleasure ground are three very pretty curvilinear iron-bar hothouses, erected by Baily, of London, and devoted to the growth of exotic plants and pine apples, which evidently fully answered in that climate their intended purpose. Here is also a good kitchen garden, with numerous low houses and pits for the growth of the pine, vine and peach, as well as one devoted to orchideous plants, a collection of which was just then forming. The pines and exotic plants in this establishment were all in a very flourishing state, and the gardens in pretty fair keeping.

We next proceeded to the seat of Le Chevalier Parthon Divan, whom I found devotedly attached to horticultural pursuits. The grounds attached to his château are very prettily formed, and are situated about four English miles from Antwerp. This gentleman pointed out to me the *Rhododendron ferrugineum*, with white flowers, which I believe is hardly to be met with in any other collection. He has many good and rare species of greenhouse plants. I saw from five to seven species of *Scotia*, also a fine specimen of the *Scotia angustata*; a collection of *Orchideæ* is also cultivated here; and he has lately introduced many new and curious species of this tribe of plants, as well as some new *Cacteæ*. The variety of dahlias cultivated here was particularly fine; a very complete arrangement of herbaceous plants growing along the face of a bank in their natural arrangement forms also an interesting feature in these grounds, the exterior of which is bounded by a plantation, in which are formed various beech avenues. This gentleman disposes of his duplicate plants to any one who will purchase them, but did not seem inclined to make any exchanges.

We next visited the gardens of Madame Smetz, which are situated about four miles from the last place. These grounds are celebrated for their extent of hot houses and other garden ornaments, which may justly entitle them to be considered as presenting a greater variety of picturesque objects than any garden in Belgium. There is a very good greenhouse, with

a pretty fair collection of plants in very neat order, and a corresponding house for the growth of stove plants. I here observed the *Pandanus odoratissimus*, fifteen feet high, with four large branches diverging from it. A large orangery, that runs parallel to the north ends of the stove and greenhouse, forms a centre betwixt the two latter buildings, that appear like two projecting wings to the orange-house; there are also several low houses and pits for pines, vines, and peaches. The pines in these gardens were amongst the best grown that I had previously met with on the continent. I observed a plant with seven fruits on it all branching from the top of a single stem. There were also some very fine dwarf cocks-combs growing in a pit.

The superb Chinese tower is more deserving of notice than anything of the kind that I have yet seen, being of a considerable height, from sixty to eighty feet I should imagine from its appearance, with a handsome staircase leading to the top, from whence there is a fine prospect of these extensive grounds, which are curiously laid out; in this Chinese building a couple of handsomely fitted up rooms are occasionally used for taking tea or coffee.

There are numerous walks leading through various parts of the grounds to secluded spots, where we come unexpectedly on groups of figures in stone, such, for instance, as a group of boys at play, fi-

gures of old men, and groups of sheep grazing in the grounds, which are very naturally executed, and at a short distance formed a very good deception; there are also numerous marble busts and pieces of sculpture. A sheet of water, with rock-work and a wooden bridge, appear prominent objects from the Chinese temple. Opposite to the south and north sides of the mansion are curiously clipped box hedges, with pyramidal formed bushes on their top; the intervening spaces being clipped into irregular figures, presenting a curious appearance. A rock bridge, over the narrow part of a sheet of water, is deserving of notice; but the wooden bridges here and elsewhere in Belgium are made more for the intention of permitting ships to pass under them, than for the ease of the visitors in walking over them. I also observed several painted arbours and recesses in different parts of the grounds, and one of the finest specimens of the purple beech that I have ever seen, which is a truly magnificent tree. The kitchen cropping, such as cabbages, asparagus, &c., being carried close up to the house, is in very bad taste; these vegetables all appearing in view from the principal windows do not harmonize with the ornamented ground, which, in such an extensive piece, might easily be cultivated in a much more appropriate spot.

Oct. 2nd. Left Antwerp at six o'clock a.m., passing through a beautiful fertile country, which

abounds in vegetable and other green crops; we airrved at Malines about eight o'clock; it contains about twenty thousand inhabitants, and has some pretty churches, and an ancient cathedral. The rail-road from Brussels to Malines had been completed for some time, and was expected to be finished as far as Antwerp by the end of another month, and to proceed from hence to Paris. At Malines I quitted my tedious mode of conveyance for the rail road—a much more pleasant and expeditious mode of travelling. We were about forty minutes going by it the distance of twelve English miles; a heavy train of carriages and a strong wind right ahead, prevented our accomplishing the distance in the usual time, which was said in general to occupy the space of from twenty to thirty minutes.

On my arrival at Brussells I proceeded to the establishment of M. J. F. Vandermaelen, which consists of an extensive collection of geographical books, minerals, birds, insects, and plants, from various climates, which this gentleman offers for mutual exchanges, with the view of furthering the interests of science and natural history.

The grounds attached to it are rather confined, but prettily varied, with water, and rising and undulating ground. There are also several very good hothouses, and a choice collection of plants. M. Vandermaelen's catalogue enumerates nearly two hundred and forty sorts of *Camellias* and above four

hundred and fifty sorts of *Pelargoniums*. I here observed a specimen of the *Cactus senilis*, about two feet in height; several other very fine and curious species were likewise to be seen here. M. Vandermaelen has also sent out a collector in search of *Cacteæ* and other orchideous plants.

I next proceeded to the Brussells Botanic Garden, which contains the most ornamental range of hothouses that I have seen, and some noble specimens of palms. The *Caryota urens* about forty-five feet high, its girth at eighteen inches from the ground, four feet. The *Arenga saccharifera* and the *Carica Papaya* both forty feet in height. The *Elate sylvestris* had also reached to the glass. The *Latania borbonia*, about eighteen feet high, the fronds spreading in the like proportion. The *Pandanus odoratissimus*, a fine specimen, and various other species equally luxuriant. This magnificent range of plant houses are all heated with steam, and the sash bars formed of wrought iron;—the effect of it from the Boulevards is really grand. The principal range being situated on a terrace, with several fountains and broad flights of steps in front of it, has a very imposing appearance; on a lower level in front of these houses and terrace, are two ranges constructed with curvilinear iron bars, which are occupied by pine-apple plants and other dwarf tropical species. Opposite to the hothouses are the herbaceous grounds, which are laid out in a circular form, divided in small divisions, for the Linnean

arrangement of the hardy perennial plants, each class forming a separate piece of ground radiating from the centre. This garden consists of a fine irregular piece of ground, and is much varied in its surface, having five different levels, and is placed in a fine situation; but I regretted to see the ground occupied by a quantity of common forest trees and shrubs, and but little of novelty or good plants in it: the common sorts were grown principally for sale, and for the support of the garden, which practice I understood was extensively adopted in this establishment. The hothouse and greenhouse species were ticketed with the price required for the different plants.

I next called on Mr. Bigwood, who kindly procured me a sight of the Prince of Orange's splendid residence, which is justly considered one of the finest finished palaces in Europe, with most beautiful polished oak floors, and the walls of several of the apartments inlaid with marble: in one of the rooms that belonged to the princess is a table of Siberian lapis lazuli, valued at fifty thousand pounds. The chairs, tables, paintings, and other superb furniture in the interior of this palace, with its magnificent staircase, are beyond my powers of description.

The park at Brussells is situated in front of the king's palace, and is said to contain about fourteen acres of ground, which are laid out as a public promenade for the inhabitants, with several avenues, and various groups of sculpture, which are consi-

dered of superior execution, especially the statues of Alexander the Great, and Cleopatra, and the groups of Diana, Apollo, Narcissus, and Venus. In the avenue fronting the king's palace are statues of the twelve Roman emperors, and a fountain, which throws the water from twelve to fifteen feet high.

I proceeded next to Louvain. The entrance to Brussells from the Louvain gate is very fine, and commands extensive views of the adjacent country, as well as a part of the town. The small villas leading from this entrance towards Louvain are handsomely ornamented with tastefully planted gardens; the road, winding along through a fine agricultural country, is more varied than in the Antwerp district; the soil consisting of a deep red loam, produces abundantly red clover, rape, and other green crops.

October 3rd. The town of Louvain is situated on the river Dyle, which runs through it. The grand appearance of the Stadt-huis, or now police-office, is very imposing; the numerous carved figures and spires that adorn the front are beautiful specimens of workmanship: in the interior a large apartment is occupied as a picture gallery, in which are deposited some very fine old paintings: the wainscot ceilings of some of the rooms are also well worthy of notice.

There are likewise several churches in this town, which are richly ornamented with paintings and other costly decorations, such as marble columns.

The botanic garden adjoins the town, and contains from two to three acres of ground; the space in front of the range of hot houses is occupied with a collection of hardy perennial plants, and the exterior of the garden planted by trees and shrubs. The range of plant houses consists of a long dark-roofed green house, with a circular stove projecting in front of it at each end, which has a very good effect; these stoves are constructed with iron bars, and appeared to stand remarkably well; in one of them was a very fine specimen of the *Latania rubra*, which was in great luxuriance; the *Maxillaria Harrissonia*, was quite covered with large flowers. The *Cactus Macrocanthus*, was here four feet in circumference; several other species were also very fine; in short, the whole collection were in a healthy and flourishing state. I found M. Donkelar, the gardener, to be a very intelligent young man, devotedly attached to his business.

I next proceeded to see the collection of fruits and trees at professor Van Mons, where I was shewn a large assortment of pears, which the professor had raised from seed, also many sorts of apples, and several good seedling grapes and peaches. The professor has long been distinguished for his attachment to horticultural pursuits; but I unfortunately did not find him at home; he has, however, forwarded to me, since my return home, his "Arbres Fruitiers," which describes many of the fruits cultivated in Belgium. I was much gratified by the fine

collection of pears in the fruit room, and the fine healthy trees in the professor's gardens, which are well stocked with seedlings, as well as others in a bearing state.

I next proceeded to the duke d' Aremberg's, which is situated at a short distance from Louvain, having a letter of introduction from Sir R. Adair, to his highness, whom I found particularly attached to botany and horticultural pursuits. The kitchen garden here is very extensive, and large quantities of vegetables are cultivated; several pits for the growth of the pine and peach were also in this establishment; but the collection of choice pears pleased me more than any I had previously seen, and certainly produced very fine fruit; the following sorts were pointed out to me as the best deserving of cultivation, which were then in the fruit room.

Beurre Wirtemberg	Beurre D' Hiver	Colmar Jaminette
Grande Bretage	Double d'Automne	Beurre d' Angleterre
Sucre-Vert	Comperete	Bergamotte de paques
Beurre rance	Kanneck	St. Germain
Beey vaet	Passe Colmar	Roi de Louvain
Beurre bosque	BezydaChaumontelle	Beurre d'Aremberg
Bergamotte de la Penticote	Fondante De Charnusee	Beurre de yelle St. Bernard

and many other sorts, and fine collections of apples which were also extensively grown here. I also observed a very fine collection of seedling dahlias,

many of which were very choice flowers, and formed a gay appearance in the kitchen garden borders in this season. His highness pointed out to me a noble specimen of the *Platanus accidentalis*, which measured, at four feet from the ground, thirteen feet in circumference, and its branches spreading over a space of ground twenty two yards in diameter; this was a beautiful grown tree, and appeared in great luxuriance.

The grounds attached to this ancient mansion are very extensive, and have several fine straight avenue walks, leading in various directions, one of which is formed by the purple beech planted on each side of the walk for a considerable distance; but this being a very wet forenoon, I was unable to see the grounds to advantage. They are a little varied as we approach the house, and a small stream of water enlivened the scenery: they appeared to me, however, of much less extent than his highness's grounds and park at Enghien, where his splendid range of plant-houses and extensive collection of plants are fixed and deposited.

I left Louvain about four o'clock, and arrived in Brussells just in time to get my luggage taken to the diligence office, from whence the diligence started at half-past nine o'clock for Paris.

Oct. 4th. Arrived at Valenciennes, a good sized town: here another passport was furnished, and my former one taken from me, and retained by the police until the evening I left Paris. The coun-

try between Brussells and Valenciennes, as far as I could observe, appeared to be of considerable sameness, but the ground was well cultivated, with good crops of rape clover; the turnip was evidently a failure here, and in other parts of the continent, as well as in England.

We arrived at Cambray at two o'clock, a strong fortified town. The country from Brussells hitherto appeared to be but very thinly planted, and of little picturesque scenery: as we approached Paris there appeared very few plantations or trees worthy of notice, and much less variety of scenery than I passed through in the latter part of my tour through Germany.

Oct. 5th. Arrived at Paris at half-past ten o'clock, a.m. after a ride of twenty-four hours. On my arrival I proceeded to the Gardens of the Tuilleries, where there is a large collection of orange trees, and several capacious gravel walks, or avenues, with numerous ornamental groups of sculpture. A space of ground, running parallel to the palace, about sixty yards wide, has been lately laid out with flower borders, and is separated from the public promenade by a grass *ha-ha*, with a slight wire fence on the top of it; in this inclosure are some very fine orange trees, bronze figures, and ornamental sculpture, arranged along the edges of the walks.

A very fine walk leads from the palace towards a piece of water at the entrance from the Place Louis XV., where there are various groups of sculp-

ture and terrace walks, which have a very imposing effect. The walks and flower borders in the promenade were in very neat order, and the triangular pieces of grass not so roughly kept as some I had previously seen about the seats of royalty. The walk or road leading from the Place Louis XV. to the magnificent arch now nearly completed on the rising ground near to the Barrier Neuilly, has a fine effect, and the prospect from this arch, which is much elevated above the town, is very grand.

Oct. 6th. This morning I proceeded to the seed establishment of Messrs. Andrieux and Vilmorin, to whom I had a letter of introduction from Mr. Lawson, of Edinburgh; these gentlemen very kindly furnished me with a note of the various gardens and objects most worthy of notice.

I then proceeded to the *Jardin des Plantes*, where I was much gratified with numerous fine specinens from all quarters of the globe. Mr. W. Douglas, a young man lately sent to this garden from Chatsworth by the Duke of Devonshire, conducted me through the various departments. I was much pleased with the elegant appearance of two very fine houses that were then nearly completed, one of which was just receiving the plants.

These houses are seventy-two feet long each by forty-two feet wide, and about fifty feet high; the space where the tubes stand is sunk about six feet under the floor or foot-path level, so that the whole of the tubs, boxes, and pots may be concealed, and

the plants have the appearance of being planted out in the border. There is a very handsome marble cistern about the centre of the house for supplying the plants with water. These houses consist of a double span roof, are constructed with iron bars, and heated by steam; the under-ground work is very judiciously arranged: it appeared from the excavations that were here proceeding, that the range of glass was to extend to the *Galerie d' Histoire Naturelle.* There are numerous other hot-houses on different elevations well stocked with healthy plants, one of which is devoted to *Succulentæ*, where I observed several fine specimens of *Cacteæ.* The curvilenear iron bar appeared to be the favourite material used for the erection of plant-houses in this establishment, which must evidently be the most economical and substantial for large houses. I observed this bar used in various parts of Belgium and Germany, where they apprehended no fear of the breakage of glass by expansion or contraction, although the frost is much more intense in those countries than in this.

I here saw a very fine plant of the *Araucaria Cunninghamia*, which appeared to be from nine to ten feet high, beautifully feathered from the pot to the top. The *Araucariæ excelsæ* were tall plants, but evidently drawn up, and had been too much confined, as they were not feathered equal to the specimens at Baron Rothschild's and at Prince de Ligne's. The ground in this far-famed *Jar-*

din . des Plantes appeared to be too contracted for the various purposes that it is devoted to. An enclosed apartment is under a nursery of trees and shrubs, another for hardy herbaceous plants, and one planted with a collection of the various fruits, particularly of pears, in beds about four or five feet wide, with four feet in width of paths between them; these beds were covered with short dung, to prevent the roots of the trees from becoming too dry. The fruit was, unfortunately, all gathered, so that I had not the pleasure of seeing the various sorts that are here cultivated: nearly adjoining to the fruit tree department is the zoological establishment, with a very numerous collection of animals. The museum of natural history is situated at the extremity of the new range of hothouses; the collection of birds, minerals, quadrupeds, shells, &c. is really astonishing: there are also numerous specimens of *Fungi* preserved in one of the departments.

I next visited the nursery garden of M. Noisette, which is well stocked with *Camellias* and stove plants; the former had numerous seed vessels perfecting on them. The small low hothouses are in a very dilapidated condition, and the plants in a crowded state for want of more room; although there is a great extent of glass, such as it is. The grounds are likewise crowded with fir trees, which were evidently planted for shelter and shade from

the effects of the sun, but they give the ground a cheerless and contracted appearance.

I next proceeded to the vegetable garden of M. de Coufle, which is considered amongst the best in the neighbourhood of Paris for culinary forcing, but I saw but very little in it at this season of the year at all worthy of a visit.

At a short distance from the latter is the garden of Prince D'Esling; the neatness of this little spot, which was very gay with dahlias and other autumnal flowers, was very pleasing. There is also cultivated here a very extensive collection of pine-apples evidently for sale, as at this season of the year, there must have been nearly two hundred fruit, and some thousands of young plants, which for health and well-swelled fruit were but little inferior to any in England. The largest fruit was grown in a low span-roofed house, and planted out into the beds into a mixture of sandy peat; the house was six feet six inches high, with a foot path in the centre, and the beds for plants along each side. The succession pines are grown in wooden frames with dung linings around them, and were in great vigour of health. The *Providence* and *Montsserats* were extensively cultivated. A very complete stove for exotic plants is also here. The *Aristolochia Braziliensis* was beautifully in flower, and the other plants in a very healthy state.

I next visited the Pantheon, a noble edifice, with

magnificent architectural columns, and cornice: it is reckoned one of the finest erections in Paris.

Oct. 7th. Went at six o'clock this morning to see the fruit and vegetable market: the display of pears, grapes, and wallnuts was very fine, there were also a number of peaches, but these were rather of an inferior size to those grown on the open walls in England. The fruit market was really so crowded with baskets of pears and women that it was with much difficulty that I could pass through it: there was an abundant display of vegetables. Cardoons were now brought to market, and a few bunches of small asparagus; celery appeared in great abundance and of good quality; various baskets of the Alpine strawberry and a few pretty good looking melons were also to be had.

I started at eight o'clock for Versailles, passing through a beautiful part of the country, well planted with numerous handsomely erected villas, and the road winding along for a considerable distance by the river Seine.

On my arrival I proceeded to the gardens, where I was quite astonished at the extent of these magnificent grounds; there were numerous groups of sculpture and bronze, and fountains ornamented with various figures, such as sea monsters, dolphins, &c. which spout the water into the basons, the effect of which, when the water-works are playing, must be grand in the extreme.

The various terraces, parterres, and avenues, the

latter leading in every direction, with their beautiful groups of sculpture, are very grand.

Under the south terrace is situated the orangery, and from the terrace walk we look down upon at least several hundred magnificent trees, which for number and vigour of health, were undoubtedly surpassed by none that I had previously met with on the continent; I am, however, inclined to think that there were some at Sans-souci fully as large.

The orange-houses are all formed under the south terrace, and appear like arched cellars, with only glass windows in front; I could perceive no means of applying artificial heat, but the windows were furnished with shutters, which appeared to be the only protection they had against frost; they were busy at this time removing trees to their winter quarters.

From the orangery I proceeded through various other parts of the grounds, and also to the *Grand Trianon*, which is situated about two English miles from the palace of Versailles; the grounds attached to it are laid out according to the English style of gardening, with fine pieces of water, rock-work, temples, and rustic erections. They contain a fine assortment of hardy trees and shrubs, planted on the grass, which gave it the appearance of an arboretum, but there seemed to be no regular arrangement of the plants. There is a green-house attached to these grounds, and a good show of autumnal flowers in front of it, such

as dahlias and other annuals. The gardener was not at at home. On my return from the garden I took another route through the grounds attached to Versailles; but to attempt to describe them would have required much longer time than my cursory visit would permit, or to enumerate the different objects of interest and magnificence that are dispersed throughout them. I then visited the kitchen garden department, which consists of an extensive piece of ground, subdivided into numerous divisions by walls, on which are trained vines and peaches; the Fontainbleau grape appeared to ripen and swell its fruit remarkably well, and was very abundant in its production; it seemed to be more generally cultivated than any other sort; in front of the vine-wall it is also grown to a trellising, and produced very fine fruit considering its being grown out of doors. In one of the compartments devoted to the peach trees I observed the Royale peach extending over a space of wall forty-two feet long, and from eighteen to twenty feet high; it was in excellent health, and regularly furnished with fine bearing shoots. In another compartment is a collection of standard pear trees.

The forcing ground contains numerous low houses and pits for the growth of the pine, vine, and peach. The pine-apple in this establishment was remarkably well grown and fine fruit, and little if any inferior to those that I have seen. The fruiting plants were also planted out into beds in

light sandy peat soil, which evidently suited them well. The succession pines at this time were undergoing a shifting and disrooting,—a practice not generally adopted at this season in England.

Vegetables are extensively cultivated in the gardens, and a good collection of the hardy fruits, which were all gathered by this time, consequently I had not the pleasure of seeing the quality or produce from the different trees.

On my return to Paris I visited the Luxemburg Gardens, which contain some fine old orange trees and *Nerium oleanders*, arranged on the side of the walks; the grass-plats are surrounded by flower-beds and various avenues of horse chesnuts, ornamented by sculpture, which lead in different directions, forming a pleasant promenade.

Oct. 8th. This morning I proceeded to M. Boursalt's, who was then residing out of town; his collection of plants was formerly very celebrated, but he has lately disposed of the greater part of them, and an extensive range of plant houses: there being now only two small flower houses left, which contained some fine specimens of *Camellias*, and some beautiful marble statues. The Noisette and Chinese roses were in great beauty, as well as some fine *Magnolias*. This spot of ground, although apparently not above two acres in extent, is prettily varied with rock-work, water, and artificial banks.

From hence I visited the Burying-ground at Montmartre, which is thickly planted with trees and

shrubs. I then proceeded to the Louvre, where I was much gratified by the magnificence of the gallery of paintings, as well as the incomparable marbles.

I next visited the cemetry of Pêre la Chaise, which is an extensive piece of ground, with numerous walks leading through it, and the different tombs enclosed by the upright cyprus, thujas, and other shrubs. On my arrival a funeral service was performing in a small chapel, situated about the centre of the ground, and which was then lit up by candles. After taking a cursory view of this cemetry I made the best of my way to Montreuil, to see the celebrated peach-tree gardens; on my approach to it, I was surprised at the extent of white walls in this part of the country, which were all chiefly covered with peach trees and grape vines. After ascertaining that the most celebrated garden at Montreuil belonged to the Prefêt, and was situated at the top of the hill, I made the best of my way to this spot; I found the owner a good practical gardener. He took great pains in pointing out to me his method of pruning and training his peach trees: the English gardener, however, has nothing to learn in France in the management of the peach tree; in fact, we can hardly enter into a garden in England that we cannot find trees more tastefully trained, and fully as well furnished from the bottom of the wall to the extremity of the tree, as any that I met with

in the neighbourhood of Paris. The peaches on the walls in this country are much larger than any in France or Belgium, although the soil and climate in these countries are more congenial to the growth of this tree, and maturity of its fruit, than our more northern atmosphere.

The roots of the peach tree and vines were all covered this season with half rotten dung, for the space of from three to four feet from the wall, which kept the roots in a moist state; the walls generally averaged from eight to nine feet in height, and were well sheltered by the number of cross walls that were in the different gardens. I visited one or two other gardens in the vicinity of the Prefêt's, but they appeared very similar to the one already described.

On my return from Montreuil I made a cursory visit to two small nurseries, which attracted my attention by the quantity of large orange trees exhibited for sale, and were to be sold at a very trifling sum in comparison to what they cost in England.

I also made a hasty visit through Messrs. Vilmorin and Andreux' seed ground, where there was a large stock of annuals growing for seed, and a good collection of hardy perennial plants.

Oct. 9th. Started for the Vitry nurseries, which are about six miles from Paris; the extent of nursery ground under fruit-tree cultivation in this part of the country extends nearly five miles in length, and

the number of nurseries amount to about two hundred. The Paris markets are principally supplied from this part of the country. M. Chatenay is considered the most extensive grower in that line, and has certainly a fine collection of peach trees and other hardy fruits, which were in a very healthy moveable condition, as also numerous fine standard rose trees, these being out of flower I was unable to judge of their merits. The prices of the fruit trees were very little less than in the London nurseries for similar sized trees. I observed but little new in ornamental trees or shrubs, these nurseries being chiefly devoted to the culture of fruit trees, the soil being peculiarly adapted thereto, being a rich reddish loam, yet it was in some cases undergoing a strong manure and fallow. A portion of what was previously occupied by nursery stock was under the plough. M. Chatenay informed me that they found great difficulty in procuring a suitable soil for their different fruit trees. I did not observe any hothouses about Vitry for tender plants. The nursery grounds extend as far as Choisey, over a large tract of beautiful ground. I saw large crops of grapes which were used in making the wine, which is produced in considerable quantities at Vitry.

On my return from these nurseries I proceeded to the nursery establishment of M. Cels, which contains a fine collection of stove and greenhouse plants, as well as many rare and hardy species;

in short the collection here is more choice than extensive, and the plants were very well grown. There are several hothouses and low pits well stocked with good plants, and a range of new houses then building. This nursery is considered to contain the best collection of plants about Paris; the extent of ground is but limited, and not very well kept.

I next desired my guide to conduct me to the flower market, when, after a considerable walk, I found myself in the flour market, which was well stocked with sacks of flour and grain. I was, however, much pleased with the fine circular building, with lofty dome, and the quantity of grain it contained. I then proceeded to the real flower market, which was held this afternoon at the Magdalen, a most magnificent building. The quantity of flowers fell far short of my expectation: the Neapolitan violet and the more common sorts of autumnal flowers were the principal stock exposed for sale this day.

Left Paris at seven o'clock in the evening for Rouen, where I arrived on the morning of the 10th, about ten o'clock. I immediately proceeded to the nursery garden of Mr. Calvert, where I found an extensive range of hothouses rapidly falling into a state of dilapidation for want of paint and other repairs. The nursery ground was also principally in a waste state, except a part in which dahlias were cultivated, and which were certainly very fine, containing both the French and English collections. Mr. Calvert's son informed me that his father was then clearing the

ground of the stock with the intention of removing it to England, where he intended commencing the nursery business.

I was also informed that the Rouen Botanic Garden was contemplated to be formed on the site of this nursery, which is unquestionably a fine situation for it.

I then visited the nursery of M. Vallet, which contains a large quantity of very fine orange trees, that he was very anxious to dispose of at £10 per tree. There is likewise a good collection of greenhouse plants and hardy shrubs, as well as standard roses; the latter M. Vallet frequently brings to England to be disposed of in the London markets.

I next proceeded to the Botanic Garden, which appeared to contain about an English acre of ground, with two or three old hothouses for plants, with but a limited stock in them. There appeared to be a pretty good collection of hardy perennials and annuals, but few shrubs, or ornamental trees.

I then made the best of my way to M. Prevost's nursery, which is undoubtedly the most extensive and contains the best collection of plants about Rouen. The quantity of standard roses cultivated in this nursery is immense; a priced catalogue of them has been lately printed, the prices specified in it are very moderate. The blood peach was here with plenty of fruit on it, but it evidently will not get soft or fit for use in the open air. I also observed several other ornamental trees in

this establishment; it was likewise well stocked with a large assortment of fruit trees.

The scenery about Rouen is very beautiful and picturesque, and is varied by some large white chalk hills: the river, with numerous small vessels, tends greatly to enliven the scene.

Oct. 11th. Went to see the ancient cathedral, said to have been commenced by William the Conqueror. I was much pleased with its fine Gothic appearance, as well as with the paintings, stained glass, and other ornaments. There is another church in this town, called St. Ouen, deserving of the stranger's notice, which appeared to me but little inferior to the cathedral. The *Palais de Justice* is also a curious old building.

Left Rouen at eleven o'clock for Dieppe, where we arrived at five in the evening, passing through a fine varied country, richly clothed with fruit trees and agricultural produce, which appeared to be in a very flourishing state.

Oct. 12th. Being confined all this day at Dieppe by contrary winds I made an excursion round the vicinity of the town, which is very picturesque and considerably varied, I also visited the nursery garden of M. Racine, which contained a very fine collection of dahlias, standard roses, a fine assortment of pears, and other hardy plants; and a small greenhouse, in which a few good *Cacteæ*, and other showy plants, were cultivated and in good order.

The cathedral in Dieppe is an ancient building, and worth the notice of the stranger.

Oct. 13th. Left Dieppe at two o'clock in the morning for Brighton, when we experienced a pretty tossing for the space of twenty-five hours, in consequence of contrary winds. The passage is generally performed in ten or eleven hours when the weather is favourable.

Oct. 14th. We arrived about three o'clock this morning at Shoreham, a small port, about three miles from Brighton: as soon as day dawned I made an excursion through the town, and got my luggage ready by ten o'clock, when I started for London, where I arrived at five in the afternoon.

Upon the whole, in regard to the general state of Horticulture in the countries which I visited, the following conclusion must be drawn: The plants in the hothouses are in most of the establishments kept in excellent order and in a healthy state; the *Succulentæ* also appeared to be much more extensively cultivated than they have hitherto been in England; But the general order and neatness of the grounds (with only a very few exceptions) were but little attended to. Nor did they appear to me to well understand the forcing of fruits, except in one or two places in France; neither did I perceive that nicety in the training of fruit trees that is thought indispensable in this country. Vegetables are, however, in large establishments, more extensively grown; but there certainly did not appear to be

such a general spirit for horticultural improvement as is now prevailing in this country. At no period was gardening and the collecting of plants ever pursued with greater spirit in England than at this moment; insomuch, that we can scarcely visit a nobleman or gentleman's gardens without observing very extensive improvements and alterations proceeding in every direction. And this we cannot but regard as an indication of application and attachment to rural improvements highly honourable to our nobility and gentry, as superseding many of those pursuits that used to prevail to a great extent with gentlemen residing in the country, which had but little tendency to the improvement of their grounds or estates.

APPENDIX.

THE Cacteæ have not hitherto obtained in this country that attention which is paid to them on the continent, where certainly a greater number of fine specimens are to be found of this interesting genus than is to be seen in our collections.

Mr. Hitchen of Norwich devoted much attention to their cultivation, and certainly had formed the best collection at that time in England. Being under the necessity of breaking up his establishment, he disposed of his Cacteæ and other succulent plants to Mr. Mackie, Nurseryman, of Norwich, from whom the Duke of Bedford purchased a considerable number in the spring of 1834. Since that period His Grace's collection has been increased by the liberality of several continental collectors during my tour; and I feel it but justice more particularly to mention M. Otto, of Berlin, who contributed many valuable species, and M. Lehmann, of Dresden, from whom I have also received about two hundred. M. Seitz of Munich, M. Bosch of Stuttgard, Mr. Booth, of Flottbeck Nursery, Hamburgh, and Professor Lehmann, as well as the Curators of the Edinburgh, Glasgow, and Dublin College Botanic Gardens, have added greatly to the collection; and with some recent acquisitions from Mr. Tweedie, of Buenos Ayres, ob-

tained through the intervention of Lord Edward Russell, have now rendered this collection superior to any one existing in this country, and little inferior to any on the continent.

The cultivation of the Cacteæ possesses considerable advantage over most of the hothouse plants, requiring little room, a matter in general of considerable importance where space is necessarily limited. They will also flourish and flower in a lower temperature than most other hothouse plants: most of the species will not require to be kept in a higher degree of heat than from 45° to 50°; some of the South American species, however, succeed best in a higher temperature. They should be kept rather in a dry state, and water used but sparingly, as these plants are very impatient of wet. The houses most suitable for the cultivation of this singular tribe should be so glazed as to effectually exclude the intrusion of water. In the extensive range of plant-houses now erecting at Woburn Abbey, one is intended to be exclusively devoted to the cultivation of Cacteæ. The soil most suitable for their growth is a mixture of sandy-peat, leaf-mould and lime rubbish, well incorporated together.

The annexed List enumerates the different species now in cultivation at Woburn Abbey.

ICOSANDRIA MONOGYNIA.

CACTEÆ, DC.

MAMMILLA'RIA. MAMMILLA'RIA. Cal. superior, coloured, 5-8-lobed. Cor. of 5-8 petals, united in a short tube. Stam-filiform. Style thread-shaped. Stigma 4-7 cleft. Berry smooth, seeds small and numerous. The flowers are produced from the *axillæ*, or base, of the *mammillæ*, or teats, and the seed vessels appearing the following year.

Systematic Name.	*English Name.*	*Form of Stems, &c.*	*No. and Colour of Spines.*	*Col. of Flower.*	*Native Country.*	*Year of Introduc.*
I. FLAVISPINÆ.						
lanífera, DC.	wool-bearing	stem-glob.	spines 10-12. ye. rigid.	*re.*	Mexico,	1823 D.S.S.
*divarícata	divaricated	stm.cyl.forked	sp. ext. wh. centr. ye.	*pk.*	.....	.... D.S.S.
Andréæ Ott.	Andrea's	stm. cyl.-obov.	sp. ext. wh. centr. 6 ye.	..	.....	1835 D.S.S.
cuneiflóra Hitch.	wedge-fld.	stm. subcyl.	sp. ext. wh. centr. 6 ye.	..	.... .	.... D.S.S.
grándis Hitch.	handsome	stm. sub-glob	sp. ext. wh. cent. 6 ye.	..	.....	.... D.S.S.
flavéscens Hitch.	yellow	stm.obov-cyl.	sp.ext.wh.cent.6 ye.apex re.	..	.....	.... D.S.S.
stramínea Haw. *flavescens* DC.	straw col.	stm-subcyl.	sp. ext. wh. cent. 6-7 wh.	*ye.*	S. Am.	1811 D.S.S.
chrysacántha Ott.	gold-spined	stm. sub-glob	sp.ext.wh.cent.6-7 ye.ap.re.	..	———	1827 D.S.S.
cylíndrica Hitch.	cylindrical	stm.obov-cyl.	sp. ext. wh. cent. 6 ye.	..	.....	.... D.S,S.
subcrócea DC.	yellowish	stm. sub-cyl.	sp. ext.wh. cent. 9 li-ye.	..	.....	1836 D.S.S.
neglécta	neglected	stm. glob.	sp. ext. wh. cent. 6-7 ye.	..	.....	1835 D.S.S.
rhodántha Ott. *atrata Hort.*	rose-fld.	stm. sub-cyl	sp. ext.wh.cent.6-7 ap. re.	..	.....	1836 D.S.S.
nívea Wend.	white	stm. sub-glob.	sp. ext.wh. cent. 4-6 ye.	..	.....	1834 D.S.S.
nivòsa	snowy	stm. sub-glob.	sp. ext. wh. cent.6 li-ye.	..	.....	1835 D.S.S.
*pulchérrima	handsome	stm. sub-cyl.	sp.ext.wh.cent.6 ye.ap.	*re.*	.....	.... D.S.S.
dichótoma	forked	stm. cyl.	sp. ext. wh. cent. 4 ye.	*pk.*	.....	.... D.S.S.
*lutéscens	yellowish	stm. sub-glob.	sp. ext. wh. cent. 6 ye.	..	.....	.... D.S.S.
eriacántha Ott.	wool.-spin.	stm. cyl.	sp. ext. wh. cent. ye.	..	.....	.... D.S.S.
púlchra B. R.	showy	stm. obl.-cyl.	sp. ext. wh. centr. 4 ye.	*ro.*	.....	.... D.S.S.
II. FULVISPINÆ.						
fuscáta Ott.	brown	stm. sub-glob.	sp. ext. ye. cent. 4 br.	..	S. Am.	1835 D.S.S.
corioídes Bosch.	leather-like	stm. glob.	sp.ext.wh.cent. 6 br. ye.	..	.....	—— D.S.S.
coronáta DC.	crowned	stm. cyl.	sp.ext.wh.cent.4 li.br.	*sc.*	Mexico,	1828 D.S.S.
pyramidális Ott.	pyramidal	stm. oblg.	sp. ext.wh.cent. 4-5. ye.br.	..	———	1835 D.S.S.

Systematic Name.	*English Name.*	*Form of Stems, &c.*	*No. and Colour of Spines.*	*Col. of Flower.*	*Native Country.*	*Year of Introduc.*
			III. RUFISPINÆ.			
parvimámma Haw.	small teated	stm.sub-glob	mam. obt. sp. 10-12.dk.	..	S. Am.	1817 D.S.⚳.
símplex Haw.	simple	stm. sub-glob.	sp.ext.wh.re.cent.4re-bk.	..	Missouri	1688 D.S.⚳.
tentaculáta	stinging	stm. glob.	sp. ext. wh. cent. br. re.	*sc.*	.....	1836 D.S.⚳.
			IV. ARACHNOIDEÆ.			
acanthophlégma Lehm.	lance-sp.	stm. glob.	sp.ext.wh.cent.4 apex re.	..	.....	1835 D.S.⚳.
bícolor Lehm.	two-col.	stm.sub-glob.	sp. ext. ch. cent. 2 li. br.	..	.....	—— D.S.⚳.
díscolor Haw.	discoloured	stm. glob.	sp.ext.wh.cent.6-8bk.br.	..	S. Am.	1820 D.S.⚳.
vétula Mart.	oldish	stm. obov.	sp.ext.wh.cent.2-4y.br.	*li.sc.*	.....	1835 D.S.⚳.
supertéxta Mart.	cobweb	stm. glob.	sp.ext.wh.cent.2-3y.br.	..	.....	1836 D.S.⚳.
intertéxta	interwoven	stm. glob.	sp. ext. wh. cent. 1-2 wh.	..	.....	—— D.S.⚳.
geminispína Haw.	two-spined	stm. cyl.	sp.exter.wh.centr.2.elon.	*re.*	Mexico	—— D.S.⚳.
pusílla DC. *stellàris* Haw.	dwarf	stm. subrot.	sp. ext. wh. cent. wh. ye.	..	S. Am.	1820 D.S.⚳.
			V. PAUCISPINÆ.			
anguláris Otto.	angular.	stm.glob.-ob.	sp.4-5.cent. 1 el.re-ap.bk.	..	.....	1835 D.S.⚳.
polyédra Mart.	many-based	stm. glob.	sp. 6-8 wh. apex re	..	.....	1836 D.S.⚳.
magnimámma Haw.	la.teated	stm.cyl.glau.	sp. 3-5 wh. apex bk.	..	.....	1823 D.S.⚳.
ZuccariniaMart.	Zuccarini's	stm. glob.	sp.2-elong br.ye.jun.wh.pu...		.....	1835 D.S.⚳.
Karwinskii Zucc.	Karwinsk's	stm.glob.glau.	sp. 6. wh. ap. bk.	..	.....	1836 D.S.⚳.
subpolyédra Salm.	sub many-ba.	stm. sub.cyl.	sp. 4. br. bk.	*li.sc.gr.*	.....	—— D.S.⚳.
cirrhífera Mart.	tend.-bear.	stm. glob.	sp. 3-5 wh. apex re. bk.	..	.....	1835 D.S.⚳.
....*spinis fuscis*	*br.-spined*	stm. glob.	sp. 3-5. ye. br.	..	.....	—— D.S.⚳.
quadrispína Mart.	four-spined	stm. sub.cyl.	sp. 4. dk. br. apex bk.	*sc.*	.....	—— D.S.⚳.
Seitziana Mart.	Seitz's	stm. obov.	sp. 6. wh. pk. apex re.	..	.....	—— D.S.⚳.
columnáris Mart.	col.-shaped	stm. sub-cyl.	sp. 6. li. br.	..	.....	—— D.S.⚳.
pycnacántha Mart.	close-spined	stm.cyl.	sp. 6. ye. apex bk.	..	.....	—— D.S.⚳.
loricáta Mart.	harnessed	stm. cyl.	sp. 4-6 ye. br.	..	.....	—— D.S.⚳.
polythéle Mart.	many-teat.	stm. glob.	sp. 6-7 ye. br.	..	.....	—— D.S.⚳.
cárnea Zucc.	flesh-col.	stm. cyl.	sp. 7-8 ye. apex pk.	*car.*	.....	—— D.S.⚳.
longimámma DC.	long-teated	stm. cyl. glau.	sp. ext. 6-7. cent. 1.elong	..	.....	—— D.S.⚳.
macrothéle Mart.	large-teat.	stm.cyl.t.elo.	sp. 6. wh. y. apex br.	..	.....	1836 D.S.⚳.
Lehmanni Ott.	Lehm.teats.	ovat elong.	sp. wh. apex bk.	..	.....	—— D.S.⚳.
sphaceláta Mart.	finger-sh.	stm. cyl.	sp. 10-12 wh. apex red	..	.....	—— D.S.⚳.
			VI. STELLISPINÆ.			
cæspitósa Salm. *densa* Ott.	tufted	stm. cyl.	sp. den. ye. cent. 2 elong	*ye.*	S. Am.	1827 D.S.⚳.
stella-auráta M.	gold-star	stm. cyl.	sp. stel. ye. ap. br. cent. o.	*ye.*	.....	1835 D.S.⚳.
ténuis	slender	stm. cyl.	sp. li. re.cent. 1 elong.br.	*ye.*	.....	—— D.S.⚳.
elongáta DC.	elongated	stm. cyl.	sp. stellate ye. apex li.br.	..	.....	.... D.S.⚳.

Systematic Name.	*English Name.*	*Form of Stems, &c.*	*No. and Colour of Spines.*	*Col. of Flower.*	*Native Country.*	*Year of Introduc.*	
VII. GLOCHIDATÆ.							
criníta DC.	hairy teats	ovat. elong	sp.centr.3 ye. br.hooked	*wh.ye.*	....		D.S.S.
ancistroides Lehm.	*glochidata* Mart.						
rubra	*red-fld.*	.....	.. ..	*re.*	....		D.S.S.
Wildiána Ott.	Wild's	teats cyl.	sp. 3 ye. br. apex br.	..	....		D.S.S.

MELOCA'CTUS. MELOCA'CTUS. Cal. superior, 6-cleft, coloured. Cor. of 6 petals, inserted in calyx. Stamens numerous. Style 1; stigma 5-cleft. Berry of 1 cell. Seed small angular. Flowers expanding amongst the tomentum on the apex of the plant.

amœnus Hffsg.	pleasant	ribs10-12	sp. 8 recurv. dk. br.	*li. sc.*	.....	1835	D.S.S.
commùnis Ott.	common	ribs-erect 12.	sp. 12-ye. br.	*re.*	W. Indies	1688	D.S.S.
viridis Ott.	*green*	.....	.. ..	..	.....	1836	D.S.S.
Grengélii	Grengel's	ribs 10-12.	sp. 8-10 ye.	...	S. Th. Is.	——	D.S.S.
meonacánthus Lk.	sm.-spined	ribs 15-acute	sp. 9-ye. br;	..	Jamaica	1835	D.S.S.
macracánthus Salm	large-sp.	ribs 12-14.	sp. 9-ye. apex br.	..	S.Domingo	1820	D.S.S.
pyramidális Ott.	pyramidal	ribs 14-17	sp. 11. elong br. re.	..	Curaçao	1824	D.S.S.
spinis rubris	*red-spined*	....	.. ..	..	....		D.S.S.
Salmiánus Lk.Ott.	Salm's	ribs 15.	sp.ext.10.c.3.elon.y.re.	..	.....	1835	D.S.S.
*octogónus	eight-ang.	ribs 8. remote	sp. 8-10 br. ye.	..	Mexico	1834	D.S.S.
*excavátus	hol.-crown.	13-ang.	sp. ext. 7-8 cent 1. re. ye.	..	———	——	D.S.S.

ECHINOCA'CTUS. ECHINOCA'CTUS. Invol. tubular imbricated. Cal. superior, inserted in the involuc. Cor: of many petals. Stam. numerous. Style 1; stigma many parted. Flowers bursting from the apexes of the ribs, behind the fascicules of spines.

GLOBOSI.

I. TENUISPINI.

Ottónis Lk.	Otto's	ribs 10-12.	sp. ext. wh. centr. br.	*ye.*	Mexico	1829	D.S.S.
tenuispínus Ott.	slender.-sp.	ribs 11	sp. ext. wh. cent. ye. br.	*ye.*	Brazil	1835	D.S.S.
Línkii Lehm.	Link's	ribs 13.	sp. ext. wh. cent. bk.	*ye.*	Mexico	——	D.S.S.
corynódes Ott.	claved	ribs 16.	sp. ext. wh. cent. br.	*ye.*	.....	——	D.S.S.
*Montevidensis.	Mt. Video.	ribs 13-obt.	sp. ye. apex br.	..	Mt.Video	——	D.S.S.
rhodánthus	rose-fld.	ribs 13-14.	sp. ext. wh. cent. br.	*ro.*	.....	——	D.S.S.
acutanguláris HB.	acute-ang.	ribs 18	sp. ext. wh. cent. br.	*ye.*	.....	——	D.S.S.
acuátus Ott.	sharp-rib.	ribs13 acute	sp. ye. 10-13	*ye.*	Mt.Video	1836	D.S.S.

II. ACULEIS ERECTIS.

pachycéntrus Lehm.	thick-sp.	ribs12-12.obt.	sp. ye. apex br.	..	.....	1836	D.S.S.
centetérius Lehm.	awl-sp.	ribs 10 tuber.	sp. ext. 8-10. cent. 4.	*li.rc.*	.....	——	D.S.S.

Systematic Name.	*English Name.*	*Form of Stems, &c.*	*No. and Colour of Spines.*	*Col. of Flower.*	*Native Country.*	*Year of Introduc.*
			III. ACULEIS RECURVATIS.			
sessiliflórus	sessile-fld.	stm.depr.r.8-12	sp. 5-6. wh.	..	.....	1834 D.S.♃.
coccíneus H.Berol.	scarlet	st.dep.ribs8-9	sp. 8-10. br. re.	.	.....	1835 D.S.♃.
spirális Karw.	spiral	st.erect. ribs8	sp. 8 varieg.	..	.....	—— D.S.♃.
recúrvus Haw.	recurved	st.glo.r.13-15	gl.sp. 9 ye. re.	..	Mexico	1796 D.S.♃.
cornígerus DC. *latispinus*	horn-bearg.	stm. depr.	sp. ye. rec. cent. flat ro.	*pk.*	Mexico	1820 D.S.♃.
hamátus	hooked	stm.dep.ribs21	sp. 7. grey	..	B. Ayres	1833 D.S.♃.
Sellówii DC.	Sellow's	st.glo.depr.10	sp. 7. centr. elon. br.	..	Mt.Video	1826 D.S.♃.
gibbósus DC.	gibbous	stm.ov.r.9obt.	sp. 8-9. bk. br.	*wh.*	Jamaica	1808 D.S.♃.
robústus Salm.	robust	stm. cyl. ribs 8	sp. 8-9 ye. slend	..	.....	1835 D.S.♃.
crispátus DC.	curled	st.cyl.r.10-12	sp. 9-10 cent. 1. br.	..	Mexico	1826 D.S.♃.
			IV. ACULEIS SUBRECURVATIS.			
tuberculátus	tubercled	stm.glo.r.8 obt.	sp. 8. ext. sp. elon.	..	Mexico	1826 D.S.♃.
platyacánthus	flat-spined	st.glo.r.21-24.	sp. 7-8. cent. 4.	..	Mexico	1837 D.S.♃.
polyacánthus	many-sp.	st.ov.glo.r.21ob.	sp. 8. spread.	..	Brazil	—— D.S.♃.
*xanthacánthus	yellow-sp.	st.depr. 11 ang.	sp. y. elong.	..	.....	1835 D.S.♃.
			SUB-GLOBOSI.			
			V. ACULEIS ELONGATIS.			
Gilliésii	Gillies's	stm.s.glo.obo.rib.	13 sp. 20 transp.	..	Mexico	1830 D.S.♃.
formósus H. ang.	handsome	ov.cyl.ri.14-16	sp. 15-18. re. br.	..	———	.... D.S.♃.
*theléphorus	nipple-bear.	st.glo.ribs 14	sp. 12-15 ye. br.	..	.....	1834 D.S.♃.
gladiátus DC.	sword-sp.	st.glo.ri.14-22	sp. 10. centr. 3 elon.	..	.....	1836 D.S.♃.
			POLYACANTHI.			
			VI. CYLINDRACEI ACULEIS RIGIDIS.			
exsculptus Ott.	exsculpted	ribs 16.	sp. dense ye. apex br.	..	.....	1836 D.S.♃
*Anconiánus	Anconian	ribs 16.	sp. ext. wh. cent. 4. dk. br.	..	Ancona	1834 D.S.♃.
*spinosíssimus	many-sp.	ribs 14-15.	sp.ext.wh.c.7-8.re br.elon.	..	.....	—— D.S.♃.
*echinátus	hedge-hog.lik.	ribs 19.	sp. li. br. elong.	..	Mexico	1830 D.S.♃.
*oxyacánthus	sharp-sp.	ribs 16.	sp.ext.ye.cent,9-10.re.br.	..	.....	—— D.S.♃.
*cylíndricus	cylindrical	ribs 12. 13.	sp. ext. wh. cent. li.br.	..	Mexico	1836 D.S.♃.
			VII. ALBISETI.			
scòpa *Ott.*	broom.	stm. cyl.	sp.den.ex.wh.ct.1-3.dk.pu.	*ye.*	Brazil	1826 D.S.♃.
spinis-albis	*white-spined*	..	.. ..	*ye.*	———	1836 D.S.♃.

CE'REUS. CE'REUS. Cal. of many leaves, imbricated on an elongated tube, exterior sepals short, the middle and inner ones coloured and petal-like. Stam. numerous. Style filiform, the apex many parted. Berry tuberculated, and scaly.

Systematic Name.	*English Name.*	*Form of Stems, &c.*	*No. and Colour of Spines.*	*Col. of Flower.*	*Native Country.*	*Year of Introduc.*
I. GLOBOSI.						
oxygonus Ott. *Echin. sulcatus.* Hort.	furrowed	ribs 13-15.	sp. ext. wh. cent. br.	*pk.*	Brazil	1829 D.S.S.
Eyriesii Turp. *Echin. Eyriesi.*	Eyries's.	ribs 16.	sp. bk. toment. short.	*wh. gr.*	.....	—— D.S.S.
turbinátus Pfr. *Echin. turbinatus* Hort.	turbinated	ribs 16.	sp. ext. wh. cent. br.	..	.....	1835 D.S.S.
multiplex Ott. *Echin. multiplex.*	many-fold.	ribs 13.	sp. ye. apex br.	*ca. sc.*	.....	1830 D.S.S.
leucánthus Gill. *Echin. ambiguus hort. Melocact. ambiguus.* Ht.	white	ribs 8-9.	sp. br. recurv.	*wh. pu.*	.....	—— D.S.S.
tubiflórus Pfr. *Echin. tubiflorus* Hort.	tube-fld.	ribs 12.	sp. 7-9. ye. ba & ap. bk.	*wh.*	.....	—— D.S.S.
II. MACRACANTHI.						
Caule erecto subobovato.						
candicans	white	9-an. ribs obt.	sp. 12-15 br. ye.	..	.....	—— D.S.S.
macracánthus	large-sp.	9-an. ribs obt.	sp. 12-14 br. ye.	..	.....	—— D.S.S.
ochroleúcus	ochre-col.	12-an. r. obt.	sp. br. apex bk.	*och.*	.....	1835 D.S.S.
Chiloénsis Colla *fl.-luteo.*	Chilœ *yellow-flo.*	10-an. r. obt.	sp. 12-16. ye. br.	.. *ye.*	Chili ——	1825 D.S.S. 1835 D.S.S.
Chiloensóides	chilo.-like	10-an. r. obt.	sp. 10 br. pelluc.	..	——	.... D.S.S.
III. CAPILLARES.						
sénilis Haw.	grey-headed	ribs 20-25	sp. elong. wh. hairs elon.	*re.*	Mexico	1823 D.S.S.
IV. LANUGINOSI.						
Caule 9-11-*angulari erecto.*						
lanuginósus L.	woolly	9--ang. gl.	sp. ye. elong.	*wh.*	W.Indies	1699 D.S.S.
Royéni Haw. *gloriosus* Salm.	Royen's.	9-ang. glauc.	sp. slen. ye. br.	*wh.*	S.Amer.	1728 D.S.S.
V. SUBLANUGINOSI.						
Caule 5-10-*angulari erecto.*						
albispínus Salm.	white sp.	9-10-an. r. obt.	sp. wh. apex ye.	..	S.Amer.	.... D.S.S.
crenulátus Salm.	crenulated	9-ang. cren.	sp. wh. apex ye.	..	W.Indies	1822 D.S.S.
gracilior Salm.	*slender*	9-10-ang.	sp. wh. apex bk.	..	.....	1835 D.S.S.
nígricans	dark	8-an. rib. den.	sp. 10-12 br.	..	.....	1835 D.S.S.
níger Salm.	black	7-an. r. compr.	sp. 9-12 ye.	..	S.Amer.	.... D.S.S.

Systematic Name.	*English Name.*	*Form of Stems, &c.*	*No. and Colour of Spines.*	*Col. of Flower.*	*Native Country.*	*Year of Introduc.*
Hawórthii D.C.	Haworth's	5-ang. r. obt.	sp. 9-10 br.	..	Caribees	1811 D.S.
flavispínus Haw.	yellow-sp.	7-10-an. ri. ob.	sp. 11-13 ye.	..	W.Indies	1822 D.S.
fulvispinósus Ha.	tawney-sp.	9-an. sulca.	sp. br. thick	..	S.Amer.	1795 D.S.
*Russelliánus	Duke of Bed.	6-7-ang. cren.	sp. bk. short. cen. 1 ang.		Demarara	1836 D.S.

VI. GLABRI.

Caule 4-10-angulari erecto.

Hystrix Salm.	porcupine	8-9-ang.	sp. grey-apex bk.	..	.....	1808 D.S.
strictus W.	erect	8-9-an.rib. com.	sp. br. apex ye.	..	S.Amer.	1822 D.S.
pellúcidus Ott.	pellucid	5-ang. r. com.	sp. br. apex ye.	..	.....	1836 D.S.
Olfersii Ott.	Olfers's	9-ang. r. com.	sp. br. ye.	..	Brazils	1836 D.S.
spinibárbis Ott.	bearded	9-10 ang. obt.	sp. ex. 10-12 c. 1-3 el. a. b. w.		.....	—— D.S.
undulátus Haw.	waved	4-ang. r. com.	sp. 3-5. bk.	*wh.*	China	1829 D.S.
*nigrospínus	dark-sp.	7-ang. r. obt.	sp. 12-13 bk.	..	B. Ayres	1836 D.S.
*heteracánthus	va. col. sp.	4-5-ang.	sp. ex. 7. va. cen. 1 wh. ap. br.		——	—— D.S.
tortuósus	twisted	7-8 ang.	sp. 7-9 slen.	..	——	—— D.S.
affinis H. Berol.	allied	4-5-ang. r. ob.	sp. 10-12 br.	*wh.*	.....	.... D.S.
gemmátus Zucc.	gemmate	5-ang. r. rem.	sp. short wh.	..	.....	1835 D.S.
incrustátus	,	5-ang.	sp. br. wh. slen. elong.		.....	—— D.S.

VII. GLAUCESCENTES.

Caule 3-6-angulari erecto.

glaúcus Salm.	glaucous.	4-an. r. com.	sp. ext. 6-8 cent. 3	..	Brazil	1835 D.S.
Jamacáru Salm.	Jamacárus	4-5-a. r. com.	sp. ext. 7-9. cent. 4. br. y.	*wh.*	——	—— D.S.
*caésius	grey	6-an. r. acute	sp. 13-14. apex ye. bas. br.		.....	1836 D.S.
grándis Haw.	great	4-ang.	sp. 7-8 erect. ye. & br.	*wh. y.*	Brazil	—— D.S.
formósus	beautiful	6-ang. r. com.	sp. 14-18. ye. br.	*wh.*	S.Am.	1834 D.S.
Peruviánus D.C.	Peruvian	6-8-ang.	sp. 7-8. br. apex ye.	*wh. pk.*	Peru	1728 D.S.
hexagonus W. heptagonus Haw.						
monstrósus	monstrous	irreg-fur.	sp. br.	*re. wh.*	S.Am.	1816 D.S.
ebúrneus Salm.	ivory	7-8-ang. r. obt.	sp. slen.		.....	1818 D.S.
tetragónus Flaw.	four-ang.	4-an. r. remo.	sp. 10-12 br. ye.	..	——	1710 D.S.
*amblygónus	obtus-rib.	7-an. gl. r. obt.	sp. ext. 7-cent. 1 dk. br.	..	B. Ayres	1836 D.S.

VIII. SUBGLAUCESCENTES.

Caule 3-6-angulari erecto.

laetevirens Salm.	br. green	3-5 an. ribs com.	sp. 6-9 br.	..	.....	—— D.S.
obtúsus Haw.	obtuse	3-5 an. ribs ott.	sp. 6-8-br. ye.	*wh. gr.*	.....	—— D.S.
Pitahaya Jacq.	Pitahaya	3-ang.	sp. 7-9 erect ye. br.	..	Cartha.	—— D.S.
variábilis Ott.	variable	3-an. ribs com.	sp. 6-8 br. ye.	..	.....	1836 D.S.
pentagónus	five-ang.	5-ang.	sp. wh. y.		S.Am.	1769 D.S.

Systematic Name.	*English Name.*	*Form of Stems, &c.*	*No. and Colour of Spines.*	*Col. of Flower.*	*Native Country.*	*Year of Introduc.*
			IX. TUBERCULATI.			
Déppei Ott.	Deppi's	6-ang. ribs obt.	sp. 8-9 wh.	..	Mexico	1826 D.S.Ꞩ.
propínquus Salm.	allied	5-ang. ribs obt.	sp. 6-7 wh. ye.	..	.....	—— D.S.Ꞩ.
leptacánthus DC.	thin-spined	5-ang.	sp. elon. wh. ye. apex br.	..	.....	—— D.S.Ꞩ.
			X. CYLINDRACEO-ATTENUATI.			
			Caule 5-11-angulari erecto.			
repándus DC.	repand	8-9 an. rib. und.	sp. 8-9 wh. & bk.	*wh.*	W. In.	1728 D.S.Ꞩ.
aúreus	*yellow-spined*				.....	1836 D.S.Ꞩ.
subrepándus Haw.	subrepand	7-8 ang.	sp. 8-9 elon. br. apex bk.	..	Carib.	1811 D.S.Ꞩ.
cærulé scens Nob.	blue	8-9 ang. glau.	sp. elon. bk. jun. wh.	..	Brazil	.... D.S.Ꞩ.
*glaucéscens	glauces.	5-8 an. ribs obt.	sp. bk.		B.Ayr.	1836 D.S.Ꞩ.
fimbriátus DC.	fimbriated	8-ang. ribs obt.	sp. 12-14 wh. apex bk.	*w.*	S.Dom.	1826 D.S.Ꞩ.
erióphorus H.Berol.	woolly	8-ang. ribs obt.	sp. 8-10 wh. spex bk.	*re.*	.....	1835 D.S.Ꞩ.
divaricátus DC.	divaricated	8-10 an. r. obt.	sp. 8-9 wh. apex bk.	..	.....	1826 D.S.Ꞩ.
serpentínus Haw.	serpentine	11-ang.	sp. 10 slen. wh. ap. br.	*pu. wh.*	Peru	1817 D.S.Ꞩ.
			XI. MULTANGULARES.			
multángularis Ha.	many-an.	stm. cycl.	sp. dense ye. br.	..	S.Am.	1815 D.S.Ꞩ.
spinis albis	*whitespined*				.....	—— D.S.Ꞩ.
myriophyllus	myriad-led.	stm. cyl. spotted	sp. ye. br.	..	.....	—— D.S.Ꞩ.
strigósus Gill.	strigose	stm. cyl. 14-a. n. s.	sp. wh. br.	..	.....	—— D.S.Ꞩ.
myriacánthus	myriad-sp.	stm. cy,. 14-15-a.	sp. 1½-inch long br.	..	Chili	—— D.S.Ꞩ.
spinósus Hitch.	spiny	st. erect. c. 14-16 a.	sp. ye. br.	..	.....	—— D.S.Ꞩ.
*Bonariensis	Bu. Ayres	st. erect 11-14-a.	sp. ye. red at base	..	B. Ayr.	1836 D.S.Ꞩ.
*tenuátus	slender-sp.	stm. erect 18-ang.	sp. ext. 7. re. ye. br. c. 1	..	.....	—— D.S.Ꞩ.
			XII. FLAGELLIFORMES.			
flagellifórmis Haw.	rod-shaped	10-an. tuberc-c.	sp. br. ye.	*pk.*	.....	1835 D.S.Ꞩ.
minor	*smaller*				....	—— D.S.Ꞩ.
*costatus	ribbed	8-9 ang.	sp. slender white	..	Peru	1690 D.S.Ꞩ.
flagrifórmis Zucc.	whip-sh.	8-ang. tuburc.	not so crowded as in last		.....	1834 D.S.Ꞩ.
Martiánus	Martins's	10-ang. tuberc.	sp. wh.	*pu.*	.....	1835 D.S.Ꞩ.
leptóphis DC.	thin serpent	6-7-an. t. remote	sp. wh. & ye.	..	.....	—— D.S.Ꞩ.
Smithii	Smith's	tuberc. none	sp. br. ye.	..	.... .	—— D.S.Ꞩ.
tenuissimus	very slender	4-5 ang.	sp. wh. slen. hair-like	..	.....	—— D.S.Ꞩ.
			XIII. RADICANTES.			
			Caule 3-7-angulari articulato.			
rádicans DC.	rooting	4-5 ang.	sp. short dk. br.	..	B. Ay.	1836 D.S.Ꞩ.
húmilis	dwarf	4-5 ang.	sp. wh. slender	..	S. Am.	1827 D.S.Ꞩ.
grandiflòrus Haw.	long-fld.	6-7 ang.	sp. wh. ye.	*ye. wh.*	Jamai.	1700 D.S.Ꞩ.

Systematic Name.	*English Name.*	*Form of Stems, &c.*	*No. and Colour of Spines.*	*Col. of Flower.*	*Native Country.*	*Year of Introduc.*
myriacaulon Mart.	myriad-st.	4-ang.			.....	1835 D.S.§.
nycticalius Lk.	night-beau.	4-5 ang.	sp. erect slender wh.	..	.....	1834 D.S.§.
Schrankii Zuu.	Schranks	4-5 ang.	sp. 6-8 sh. dk. br.	..	.....	1835 D.S.§.
*arcuátus	arched	3-4 ang. sinu.	sp. 4 dk. br.	*wh.*	.....	—— D.S.§.
Napoleónis Salm.	Napoleon's	3-4 ang.	sp. 3 remote sh. br.	*gr. wh.*	.....	1834 D.S.§.
triangulàris L.	three-ang.	3-ang.			Mexico	1690 D.S.§.
pictas	*variegated*				.....	—— D.S.§.
Lanceanus	Lance's	3-ang.	sp. ye. wh. & br.	*sc.*	.....	1834 D.S.§.
speciosissimus	shewy	3-4 ang.	sp. cent. 2-3 ye. erect	..	Mexico	1816 D.S.§.
prismáticus Salm.	prismatic	3-4 ang.	sp. dark br.	..	.....	1826 D.S.§.
trípterus Salm.	three-wing.	3-ang.	sp. dk. br.	..	.....	1827 D.S.§.
tríqueter Haw.	three-sided	3-ang.	sp. dk. br.	..	S. Am.	1794 D.S.§.
exténsus Salm.	extended	3-ang.	sp. ext. w. sl. c. 3-4 w. ye.	..	.....	1826 D.S.§.
coccíneus Salm.	scarlet	3-4 ang.	sp. ext. wh. sl. cent. 4 ye.	*sc.*	Brazil	1828 D.S.§.
setáceus Salm.	bristly	3-ang.	sp. ext. w. slen. cent. 1-3	..	.....	—— D.S.§.
setósus	setose	3-ang.	sp. br. setac. wh.	..	.....	1835 D.S.§.
ramósus Karw.	branching	3-ang.	sp. br. ye. remote	..	.....	1836 D.S.§.
myosúrus Salm.	mouse-tail	3-dented-ang.	wool-white	..	.....	1828 D.S.§.
quadrangularis Ha.	quadran.	3-4 ang.	sp. 5-7	..	Amer.	1809 D.S.§.

XIV. ALATI.

Epiphyllum Haw.

Ackermánni Haw.	Ackerman's	br. elon. compr. serr. cyl. at base	*sc.*	Mexico	1830 D.S.§.
alátus	winged	br. obl. compr. crenate	*wh. gr.*	Jama.	1818 D.S.§.
coccíneus	scarlet	br. compr. glau. crenate	*sc.*	Brazil	1828 D.S.§.
crispátus Haw.	curled	br. obl. compr. cren. invol.	*pu.*	Mexico	1826 D.S.§.
Hookéri	Sir W. Hooker's	br. comp. lin. lanc. sinuate	*wh.*	S. Am.	—— D.S.§.
phyllanthoídes DC.	Phyllanthus-like	br. comp. sinuat. cyl. at base	*pk.*	Mexico	1816 D.S.§.

HYBRIDS.

aurantíacus	*orange-coloured*	..	..	..	..	..	*or.*	.....	—— D.S.§.
ignéscens	*fiery*	..	..	..	..	..	*sc.*	.....	—— D.S.§.
Colvilli	*Colvill's*								
Jenkinsóni	*Jenkinson's*	..	..	..	..	..	*sc.*	.....	—— D.S.§.
Kiardi	*Kiard's*	..	..	..	..	..	*sc.*	.....	—— D.S.§.
Lóthi	*Loth's*	..	..	..	..	..	*sc.*	.....	—— D.S.§.
Mackoyi	*Mackoy's*	..	..	..	..	..	*sc.*	.....	—— D.S.§.
oxypétalus	*sharp-petaled*	..	..	..	..	..	*sc.*	.....	—— D.S.§.
Guillardieri	*Guillardier's*	..	..	..	..	..	*sc.*	.....	—— D.S.§.
Smithii	*Smith's*	..	..	..	..	..	*sc.*	.....	—— D.S.§.
Vandésii	*Vandes's*	..	..	..	..	..	*sc.*	.....	—— D.S.§.
rhómbeus Salm.	rhomboid	rhomboid br. elong. comp. sinuated					..	.....	1835 D.S.§.

Systematic Name.	*English Name.*	*Form of Stems, &c.*	*No. and Colour of Spines.*	*Col. of Flower.*	*Native Country.*	*Year of Introduc.*	
ramulósus Salm.	branching	branching stm. cyl.	bran. com. o. lan.	..	.....	——	D.S.
truncátus	truncated	truncated br. com.	thin d. n. at apex	*sc.*	Brazil	1818	D.S.
coccineus	*scarlet*			*sc.*	.....	——	D.S.

OPU'NTIA. OPU'NTIA. Cal. of many leaves, united to the ovary, the inner sepals petal-like obovate. Stamens shorter than petals. Style cylind. constricted at the base. Stigma many erect thick. Berry ovate, often spiny.

I. CYLINDRACEÆ.

cylindrica DC.	cylindrical	st. erect cyl. tuber.	sp. wh. hairy	..	Peru	1799	D.S.
clavarióides	batoon-like	stm. erect cyl.	sp. wh. setac. depres.	..	.....	1836	D.S.
decípiens DC.	deceptive	stm. erect gl. r.	sp. wh. ye. elong.	..	.....	1835	D.S.
imbricáta DC.	imbricated	tuber. imbricated	sp. 5-7 wh.	..	.....	1826	D.S.
Kleini DC.	Klein's	st. erect tuber. r.	sp. li. br. elong.	..	.....	1836	D.S.
leptocáulis DC.	thin-stem.	st. erect ramose	sp. small br.	..	.....	——	D.S.
ramulífera Nob.	branching	stm. erect	sp. br. ye. arcol. crowd.	..	Mexico	——	D.S.
tunicàta	tunicated	stm. ramose	sp. 5-6 wh. & pk.	..	.....	——	D.S.
pubescens Wend.	pubescens	stm. erect slend.	sp. wh. apex br.	..	.....	1836	D.S.
virgata	twiggy	st. erect ramose	sp. li. br. elong.	..	.....	——	D.S.

II. DIVARICATÆ.

Caule articulato, et articulis subcylindraceis.

articuláta Ott.	jointed	st. erect ramose	sp. 1-wh. pelluc.	..	.....	——	D.S.
alpína Gill.	Alpine	stm. ramose br.	sp. wh. recurv.	..	.....	——	D.S.
stapélia DC.	stapelia	stm. ramose	sp. 4-6 wh.	..	.....	——	D.S.
corrugáta Gill.	corrugated	br. erect cy. com.	sp. wh. apex br.	..	Chili	1824	D.S.
dichotoma	forked	joints cyl. elong.	sp. br. apex wh.	..	B.Ayr.	1836	D.S.
curassávica How.	Curassa	joints. cyl. com.	sp. 1-4 ye. wh.	..	Curas.	1690	D.S.
elongáta	*elongated*				.....	——	D.S.
andícola		joints cyl.	sp. wh. elong.	..	.....	——	D.S.
foliósa Haw.	leafy	jnts. comp. ramos.	sp. 1-2 elong. wh.	*ye.*	S. Am.	1805	D.S.
fragilis Nut.	brittle	joints cyl. obl.	sp. wh. slend.	..	N. Am.	1814	D.S.
glomeráta Haw.	glomerated	joints cyl.	sp. flat pellucid	..	.....	——	D.S.
exténsa	extended	joints cyl.	sp. wh. apex br.	*li. ye.*	.....	——	D.S.
horizontális Ott.	horizontal	jnts. cyl. ramose	sp. wh. elong.	..	.....	——	D.S.
platyacántha	flat-spined	joints cycl. ov.	sp. wh. elong. apex bk.	*ye.*	.....	——	D.S.
pusílla Haw.	dwarf	jnts. divar. cyl.	sp. 1-2 twisted wh.	*ye.*	S.Am.	1826	D.S.
sulphúrea Gill.	sulphur-fld.	joints erect	sp. twist. ap. re.	..	Chili	1827	D.S.
aurantiáca	orange-col.	jnts. com. elon.	sp. 3-5 br. ap. wh. y.	*ye.*	.....	——	D.S.
missouriénsis DC.	Missouri	joints com. ob. o.	sp. br. & wh.	*ye.*	Missou.	——	D.S.
media Haw.	intermediat.	jnts. cyl. elong.	sp. wh. recurv.	..	N.Am.	——	D.S.
attulica		jnts. elon. cyl.	sp. wh. ye. tomen. br.	..	.....	——	D.S.

Systematic Name.	*English Name.*	*Form of Stems, &c.*	*No. and Colour of Spines.*	*Col. of Flower.*	*Native Country.*	*Year of Introduc.*
Sabíni	Sabine's	jnts. com. obov.	sp. wh. deflex.	..	.....	—— D.S.
ciliósa	ciliated	jnts. com. glau.	sp. ye. br.	..	.....	—— D.S.

III. SPINOSISSIMÆ.

articulis oblongis.

spinosíssima Haw.	very-spiny	joints obl.	sp. elong. ye.	..	Jama.	1732 D.S.
dolabrifórmis	hatchet-fd.	jnts. obl. dk. gr.	sp. wh. ye.	..	.....	1835 D.S.
leucacántha Ott.	white-spin.	jnts. erect obl.	sp. wh. setac. ye.	*wh.*	S.Ame.	—— D.S.
calacántha Ott.	pretty-spin.	joints obl.	sp. 5-7 wh. ye.	..	.....	1836 D.S.
rúbra	*red-sp.*				.....	—— D.S.
leucotríche DC.	white-hairy	jnts. erect obl.	sp. flex. wh. elong.	..	Mexico	—— D.S.
senílis Parm.	grey	jnts. obov. obl.	sp. elon. wh. hairs wh.	..	.....	1837 D.S.
longíssima	longest	jnts. obl. obov.	sp. ye. elon. depr.	..	.....	1835 D.S.
polyántha DC.	many-fld.	joints obov.	sp. ye. setac. ye.	..	S. Am.	1811 D.S.
polyacántha Haw.	many-sp.	joints obov.	sp. 3-4 wk. ye.	..	N. Am.	1814 D.S.
megacántha Nob.	large-sp.	joints obov. glau.	sp. 3-5 long ones ye.	..	Mexico	1835 D.S.
albicáns Nob.	white-sp.	jnts. obov. gl.obl.	sp. wh. ye.	..	.....	—— D.S.
triacántha Haw.	three-sp.	joints obov. obl.	sp. wh.	..	S. Am.	1795 D.S.
nígricans Haw.	dark	joints obl.	sp. 3-5 ro. br. bk. ap. ye.	..	.....	—— D.S.
húmilis Flaw.	dwarf	jnts. obov. obl.	sp. ye.	..	.....	—— D.S.
lasiacántha	woolly-sp.	jnts. obov. glau.	sp. 1-4 wh. apex ye.	..	.....	—— D.S.
Dillenii Haw.	Dillenius's	jnts. obov. gl. und.	sp. ye.	..	S.Am.	1810 D.S.

IV. SETACEÆ, OR SUBSPINESCENTES.

microdasys Lehm.	small-hairy	joints obov. ye.	setac. dense ye.	..	.....	—— D.S.
minor	*O. pulvinata* DC.					
parvúla Nob.	small	joints ellip. ob. glau.	setac. br.	..	Chili	1835 D.S.
strícta Haw.	upright	joints obl. obov.	setac. ye.	*ye.*	S. Am.	1796 D.S.
tuberculáta Haw.	tubercled	joints obov.	setac. why. ye.	..	.....	—— D.S.
vulgáris Haw.	common	joints ov.	stm. creep. setac. re. br.	*ye.*	S.Eur.	1596 D.S.
major	*larger*					
italica	Italian	joints obov. obl.	setac. short ye.	*ye.*	.....	1835 D.S.
glaúca	glaucous	joints erect obov.	sp. ye. ap. br.	..	.....	—— D.S.
decúmbens Salm.	decumbent	joints obov. compr.	arcol. dk. gr.	..	Mexico	1835 D.S.
irrorata	*H. Ber.*					
cochenillíferaHaw.	cochineal Fi.	joints obov. obl.	nearly unarmed	*pk.*	S. Am.	1688 D.S.
lanceoláta Haw.	lanceolat	jnts. obov. lanc.	sp. ye. short. setac. ye.	*ye.*	.....	1796 D.S.
rubéscens Salm.	rubescent	joints elon. red-gr.	setac. wh.	..	Brazils	1828 D.S.
tomentósa Lk.	hairy	joints lanc. comp.	sp. wh setac. ye.	*yo.*	S.Am.	1820 D.S.;
Mexicána	Mexican	joints obl. lanc. elon.	setac. wh.	..	Mexico	1835 D.S.
eláta Ott.	tall	jnts. er. ob. la. a. re.	sp. 1-wh.	..	S.Am.	1731 D.S.
Salmii	Salm Dyck's	jnts. obov. ob. gl.	sp. 2-4 wh. setac. br.	..	.....	1835 D.S.

Systematic Name.	*English Name.*	*Form of Stems, &c.*	*No. and Colour of Spines.*	*Col. of Flower.*	*Native Country.*	*Year of Introduc.*
decumána Haw.	great-ob.	jnts. ov. obl. gl.	sp. wh. setac. ye.	..	.....	1768 D.S.S.
candelabrifórmis	candlestick-fd.	jnts. obov. ott.	sp. 1-3 wh. setac. ye.	..	.....	1835 D.S.S.
grandis	great	jnts. ellip. ob. gl.	sp. 1-wh. setac. ye.	..	.....	—— D.S.S.
Americana	American	jnts. ellip. glau.	sp. 1-wh. setac. ye.	..	Amer.	—— D.S.S.
Amcylcea DC.	Neapolitan	jnts. ob. ellip. c.	sp. wh.	..	Naples	1825 D.S.S.
Tuna Haw.	Tuna	jnts. ov. obl.	sp. elon. ye.	*ye.*	S.Am.	1731 D.S.S.
Ficus Indica	Indian Fig.	joints obl.	sp. setac.	*ye.*	.....	—— D.S.S.
crassa Haw.	thick-lobed	joints obov. obl.	glau. setac. ye. br.	*ye.*	Mexico	1811 D.S.S.
Bonplandi	Bonpland's	jnts. obov. orb.	sp. 2-5 ye.	..	.....	—— D.S.S.
horrida Salm.	horrid	jnts. ob. repand.	sp. ye.	*ye.*	S.Am.	—— D.S.S.
Pseudo Tuna Salm.	False Tuna	joints obov.	sp. br. ye.	*ye.*	.....	—— D.S.S.
longispina Haw.	long-spin.	jnts. ellip. ob. li. gy.	sp. 1-2 elon. gr. br.	..	Brazil	1825 D.S.S.
Hitchenii	Hitchin's	jnts. ob. ellip. gl.	sp. 1-3 elon. ye.	..	.....	—— D.S.S.
Parote?		jnts. obov. glau.	sp. 2-3 wh. ye.	..	.....	—— D.S.S.
spinulifera Salm.	small-spin.	joints obov.	sp. deflex. wh. ye.	..	Mexico	1836 D.S.S
dejecta Nob.	dejected	joints obl. elon.	sp. 1-3 br. ye.	*ye.*	Havan.	—— D.S.S.
monacantha Haw.	single-sp.	jnts. obl. obov.	sp. 1-2 br. ye.	..	S.Am.	—— D.S.S.
flexibilis	flexibile	jnts. ob. orb. gl.	sp. 1-ye.	..	.....	1836 D.S.S.
sericea G. Dom. *cærulea.*	silky	jnts. obov. glau.	sp. ye. setac. re. br.	*ye.*	Chili	1827 D.S.S.

V. PARADOXEÆ. SALM.

Braziliénsis *tenuifolia*	Brazil *slender-leaved*	jnts. com. fl. ov.	sp. 1-3 strong.	*ye.*	Brazils	1816 D.S.S.

PERE'SKIA. PERE'SKIA. Cal. many-leaved united to the ovary. Cor. rotate. Style filiform. Stigma aggreg. Berry globose.

aculeáta Haw.	prickly	los. ellip. acum.	ent. smth.	*wh.*	W.Ind.	1696 D.S.S.
Bleo	Bleo	obl. acum.	ent. base attenu.	*wh.*	.....	—— D.S.S.
grandifólia Haw.	large-leaved	obl. la. dott.	ben. sp. elon. bk.	*wh.*	Brazil	1818 D.S.S.
grandispína	large-spin.	ellip. ent.	sp. in clust. elon. bk.	*wh.*	.....	—— D.S.S.
portulacaefólia	Purslan-ld.	obov. cuneat.	sp. bk. ½-inch long.	*wh.*	W.Ind.	1820 D.S.S.

RHIPSA'LIS. RHIPSA'LIS. Cal. 3-6 parted, very short, the teeth acuminated. Petals 6 oblong. Stam. 12-18. Style filiform: stig. 3-6.

spathuláta Ott.	spathulated	stm. cyl.	sp. wh. br. woolly	..	.....	1836 D.S.S.
fasciculáris Haw. *parasitica Salm.*	fascicled	br. cyl. jnts.	nearly an inch long	..	.....	1800 D.S.S.
mesembryanthoídes	Mesembry-like	br. erect cyl. jnts.	crowd. hairy	*wh.*	.....	1818 D.S.S.
pendula Salm.	pendulous	br. vertic. pend.	cyl. elong.	*wh.*	.....	—— D.S.S.
pentaptéra Ott.	five-winged	stm. erect	5-ang. smth. dent.	*wh.*	.....	1836 D.S.S.
salicornóides Haw.	Salt-wort-like	joints erect	short obov. cyl.	*ye.*	.....	1818 D.S.S.
grandiflóra Haw.	large-fld.	br. cyl.	smth. jnts. obl.	*wh.*	S. Am.	1816 D.S.S.
calamifórmis	reed-shaped	br. erect	vertic. cyl. smth.	..	.....	1836 D.S.S.

The following species of Cacteæ are daily expected from Germany, but whether they will prove distinct from those in the preceding pages, I am unable to determine until the plants arrive at Woburn Abbey.

MAMMILLA'RIA.
anisacántha
canéscens
compréssa
eriacántha *flore albo*
erinácea
Hoffmanséggii
Hy'strix
Parote
polyédra
sp. colúmbia
crucígera
Dyckiána
rutíla
exsúdans
heteráctis
uberifórmis
Caput Medúsæ
gladiata
uncinata
recurva
setosa
sphacelata
tortolensis
MELOCA'CTUS.
ceratites
coronatus
coccineus
pyramidalis
——— *spinis albis*
——— *spinis fuscis*
——— *spinis longis*
proliferus
ECHINOCA'CTUS.
dicracanthus
muricatus
tortuosus
agglomeratus
anfractuosus
niger
Karwinskii
oxypterus
Pfeifferi
phyllacanthus
pulchellus
multiplex flore rubro
ingens
spina Christi
CE'REUS.
Boxamus
Bonplandii
Boydii
Brundii
Bayanensis
Columnæ
cœruleus
denudatus
elegans
formosus
——— *gemmatus*
glaucéscens
hórridus
hy'bridus
nòthus
ovàtus
platyacánthus
polygonàtus
Scottii
spectábilis
tubiflòrus
dichracánthus
geométricans
Schelhasii
aureus
azùreus
cineráscens
cognàtus
grìseus
Knightii
lividus
Mallisónii
redúctus
róridus
sublanàtus
subsquamàtus
tilophòrus
truncàtus *Altensteinii*
EPIPHY'LLUM.
latifròns
platycárpum
OPU'NTIA.
carolìna
coccínea
leucostàta
máxima
Poeppigii
polymórpha
præcox
splendens
stricta
triacántha
albispinòsa
Demorènia
Poeppigii
PERE'SKIA.
acárdia
cruénta
Pititache

Those kinds marked thus (*) were sent here, as new and undescribed species, I have therefore designated them by these names, until I can ascertain correctly whether they have been previously named or not.

CONTENTS.

Aremberg, Duke de 102, 127
Aix-la-Chapelle 95
Antwerp 115
——— Botanic Garden 117
Augsburg 73
Baden 72
Beaufforts, Count de 110
Belœil 100
Berlin 15
——— Botanic Gardens 15
Blankanese 5
Bonn 88
—— Botanic Gardens . . . 89
Boursoult's, M. Garden 137
Brussells 105
——— Botanic Garden . . . 123
Carlshrue 74
Cels', M. Nursery 140
Charlottenberg Palace Gardens . . 17

Cologne 95
Darmsdadt 81
Dieppe 143
Dresden 41
——— Botanic Garden 41
Dusseldorf 92
Enghien 102, 127
Esling, Prince de 133
Flottbeck Nursery 3
Frankfort 82
———— Botanic Gardens 84
Ghent , ... 112
—— Botanic Garden 41
—— Nurseries 112, 113
Hamburg 3
———— Botanic Gardens 7
Heidelberg 76
Hohenheim 70
Hoogart's, Baron de 109
Jardin des Plantes 130
Lacken Palace 107
Liege 96
—— Botanic Garden 98
Lignes', Prince de, Gardens 100
Louvain 125
——— Botanic Gardens 126
Luxemberg Gardens 137
Mackoy's Nursery 97
Maen's, M., Nursery 117

Malines 122
Montemartre 137
Mayence 87
Montreuil Peach Gardens 138
Munich 51
——— Botanic Gardens 52
Namur 98
Noisette's Nursery 132
Nuremberg 48
Nymphenburg 54
Paris 129
Parmentier's Nursery 104
Pêre la Chaise 138
Pfauen Insel or Peacock Island 33
Potsdam , ... 23
Prevost's, M., Nursery 142
Rhine 88
Rosenstein Palace 68
Rouen 141
—— Botanic Garden 142
Salm-Dyck's, Prince, Gardens 92
Sans-souci 23
Schwetzingen 77
Smetz', Madame, Garden 119
Stuttgard 66
——— Botanic Gardens 66
Vallet's, M., Nursery 142
Vitry Nursersies 139
Valenciennes 128

Vandermaelin, M. J. F. 122
Van Mons, Professor 126
Versailles 134

THE END.

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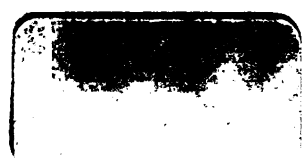
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